**Supplementary material for the article "Daily Estimates of Global Radiation in the Brazilian Amazon by Simplified Models"**

**GROUP I**

Table 8. Coefficients of the model 1 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Índices Estatísticos | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2613\* | 0.4679\* | 0.7568 | 0.088 | 2.43 | 0.9229 |
| Macapá | 0.2556\* | 0.5091\* | 0.8839 | 0.051 | 1.79 | 0.9687 |
| Barcelos | 0.2880\* | 0.4773\* | 0.7657 | 0.046 | 2.53 | 0.9299 |
| Eirunepé | 0.2844\* | 0.4525\* | 0.7143 | 0.127 | 2.14 | 0.9194 |
| Itacoatiara | 0.2279\* | 0.4581\* | 0.8062 | 0.037 | 2.27 | 0.9423 |
| Lábrea | 0.3163\* | 0.3818\* | 0.7420 | 0.077 | 2.04 | 0.9082 |
| Manaus | 0.2413\* | 0.4675\* | 0.7750 | 0.089 | 2.30 | 0.9402 |
| Parintins | 0.2350\* | 0.4945\* | 0.8710 | -0.006 | 2.00 | 0.9608 |
| S. G. da Cachoeira | 0.2335\* | 0.4755\* | 0.7527 | 0.067 | 2.38 | 0.9262 |
| Sinop | 0.3306\* | 0.4136\* | 0.6331 | 0.080 | 2.62 | 0.8737 |
| Belém | 0.2202\* | 0.3671\* | 0.6563 | -0.091 | 2.15 | 0.8885 |
| Cametá | 0.2788\* | 0.4493\* | 0.8332 | 0.016 | 1.61 | 0.9464 |
| Conceição do Araguaia | 0.2597\* | 0.4574\* | 0.8032 | -0.068 | 1.96 | 0.9440 |
| Itaituba | 0.2826\* | 0.4626\* | 0.8573 | 0.104 | 1.73 | 0.9634 |
| Marabá | 0.2923\* | 0.4133\* | 0.7843 | -0.079 | 1.82 | 0.9347 |
| Monte Alegre | 0.2730\* | 0.4751\* | 0.8886 | 0.022 | 1.34 | 0.9723 |
| Óbidos | 0.2320\* | 0.4079\* | 0.7864 | -0.065 | 2.03 | 0.9398 |
| Soure | 0.3377\* | 0.3707\* | 0.8176 | -0.117 | 1.89 | 0.9447 |
| Tucuruí | 0.2876\* | 0.3541\* | 0.6856 | -0.060 | 2.00 | 0.8932 |
| Boa Vista | 0.3019\* | 0.4346\* | 0.8339 | 0.052 | 1.81 | 0.9517 |

Table 9. Coefficients of the model 2 Group I adjusted for the 20 weather stations (p-value 0.01\*. 0.05\*\* and not significant ns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2353\* | 0.6561\* | -0.2175\* | 0.7674 | 0.062 | 2.36 | 0.9284 |
| Macapá | 0.2205\* | 0.7395\* | -0.2402\* | 0.8950 | 0.057 | 1.69 | 0.9720 |
| Barcelos | 0.2513\* | 0.7893\* | -0.3850\* | 0.7936 | 0.074 | 2.32 | 0.9431 |
| Eirunepé | 0.2527\* | 0.7484\* | -0.4112\* | 0.7469 | 0.139 | 2.01 | 0.9324 |
| Itacoatiara | 0.2001\* | 0.6761\* | -0.2497\* | 0.8194 | 0.031 | 2.17 | 0.9479 |
| Lábrea | 0.2920\* | 0.5721\* | -0.2305\* | 0.7578 | 0.096 | 2.02 | 0.9106 |
| Manaus | 0.2200\* | 0.6266\* | -0.1827\* | 0.7823 | 0.081 | 2.27 | 0.9420 |
| Parintins | 0.1966\* | 0.7531\* | -0.2722\* | 0.8882 | 0.048 | 1.94 | 0.9634 |
| S. G. da Cachoeira | 0.2043\* | 0.7067\* | -0.2952\* | 0.7672 | 0.040 | 2.29 | 0.9329 |
| Sinop | 0.3202\* | 0.4840\* | -0.0785\* | 0.6348 | 0.075 | 2.59 | 0.8778 |
| Belém | 0.2273\* | 0.3258\* | 0.0441\* | 0.6569 | -0.089 | 2.14 | 0.8897 |
| Cametá | 0.2407\* | 0.6512\* | -0.2006\* | 0.8439 | 0.017 | 1.55 | 0.9505 |
| Conceição do Araguaia | 0.2254\* | 0.6642\* | -0.2087\* | 0.8174 | -0.102 | 1.91 | 0.9484 |
| Itaituba | 0.2371\* | 0.7699\* | -0.3359\* | 0.8856 | 0.063 | 1.50 | 0.9735 |
| Marabá | 0.2616\* | 0.6127\* | -0.2149\* | 0.8015 | -0.086 | 1.76 | 0.9399 |
| Monte Alegre | 0.2314\* | 0.7094\* | -0.2352\* | 0.9013 | 0.013 | 1.27 | 0.9755 |
| Óbidos | 0.2136\* | 0.5291\* | -0.1278\* | 0.7908 | -0.047 | 2.00 | 0.9413 |
| Soure | 0.3104\* | 0.5722\* | -0.2115\* | 0.8323 | -0.110 | 1.81 | 0.9494 |
| Tucuruí | 0.2755\* | 0.4234\* | -0.0736\* | 0.6876 | -0.066 | 1.98 | 0.8960 |
| Boa Vista | 0.2750\* | 0.5883\* | -0.1606\* | 0.8395 | 0.055 | 1.79 | 0.9534 |

Table 10. Coefficients of the model 3 Group I adjusted for the 20 weather stations (p-value 0.01\*. 0.05\*\* and not significant ns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Índices Estatísticos | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2263\* | 0.812\* | -0.6850\* | 0.3620\* | 0.7690 | 0.0705 | 2.33 | 0.9298 |
| Macapá | ns | ns | ns | ns | - | - | - | - |
| Barcelos | 0.2359\* | 1.10\* | -1.36\* | 0.7856\* | 0.7994 | 0.0686 | 2.29 | 0.9448 |
| Eirunepé | 0.2398\* | 1.01\* | -1.35\* | 0.8342\* | 0.7534 | 0.1248 | 1.99 | 0.9340 |
| Itacoatiara | 0.1911\* | 0.8521\* | -0.7781\* | 0.4045\* | 0.8211 | 0.0303 | 2.17 | 0.9482 |
| Lábrea | 0.2842\* | 0.7291\* | -0.7397\* | 0.4183\* | 0.7601 | 0.1144 | 2.02 | 0.9102 |
| Manaus | 0.2109\* | 0.7920\* | -0.6755\* | 0.3763\* | 0.7840 | 0.0848 | 2.26 | 0.9427 |
| Parintins | 0.1838\* | 0.9647\* | -0.8592\* | 0.4191\* | 0.8906 | 0.0511 | 1.93 | 0.9635 |
| S. G. da Cachoeira | 0.1939\* | 0.9086\* | -0.9571\* | 0.5583\* | 0.7696 | 0.0442 | 2.30 | 0.9327 |
| Sinop | 0.3058\* | 0.7062\* | -0.7365\* | 0.5096\* | 0.6381 | 0.0793 | 2.58 | 0.8787 |
| Belém | 0.1950\* | 0.7587\* | -1.13\* | 0.8738\* | 0.6696 | -0.0913 | 2.10 | 0.8946 |
| Cametá | 0.2278\* | 0.8178\* | -0.6265\* | 0.2963\* | 0.8452 | 0.0218 | 1.54 | 0.9510 |
| Conceição do Araguaia | 0.2129\* | 0.8538\* | -0.7175\* | 0.3562\* | 0.8197 | -0.0842 | 1.91 | 0.9483 |
| Itaituba | 0.2284\* | 0.9154\* | -0.7533\* | 0.3109\* | 0.8869 | 0.0527 | 1.48 | 0.9742 |
| Marabá | 0.2453\* | 0.8711\* | -0.9370\* | 0.5269\* | 0.8073 | -0.0916 | 1.74 | 0.9417 |
| Monte Alegre | 0.2204\* | 0.8623\* | -0.6383\* | 0.2852\* | 0.9023 | 0.0115 | 1.26 | 0.9758 |
| Óbidos | 0.1996\* | 0.7644\* | -0.7910\* | 0.4845\* | 0.7943 | -0.0670 | 2.01 | 0.9411 |
| Soure | 0.2909\* | 0.9235\* | -1.17\* | 0.6831\* | 0.8411 | -0.1069 | 1.74 | 0.9534 |
| Tucuruí | 0.2615\* | 0.5987\* | -0.5409\* | 0.3380\* | 0.6901 | -0.0674 | 1.97 | 0.8970 |
| Boa Vista | 0.2537\* | 0.8630\* | -0.8987\* | 0.5372\* | 0.8429 | 0.0532 | 1.76 | 0.9552 |

Table 11. Coefficients of the model 4 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 1.25ns | 0.5623ns | 4.15\* | 0.5436 | **-** | **-** | **-** |
| Macapá | 0.9825ns | 0.8964ns | 3.17\* | 0.4123 | **-** | **-** | **-** |
| Barcelos | 0.7594ns | 0.5521ns | 5.01\* | 0.4426 | **-** | **-** | **-** |
| Eirunepé | 1.55ns | 0.2361ns | 3.69\* | 0.6521 | **-** | **-** | **-** |
| Itacoatiara | 1.98ns | 0.7469ns | 4.25\* | 0.3125 | **-** | **-** | **-** |
| Lábrea | 1.36\* | 1.24ns | 2.63\* | 0.3894 | **-** | **-** | **-** |
| Manaus | 2.65\* | 0.8823ns | 6.21\* | 0.5421 | **-** | **-** | **-** |
| Parintins | 1.56\* | 0.7894\* | 3.05ns | 0.5871 | **-** | **-** | **-** |
| S. G. da Cachoeira | 0.8756ns | 0.9214ns | 4.21\* | 0.4436 | **-** | **-** | **-** |
| Sinop | 1.14ns | 2.14ns | 6.02\* | 0.5123 | **-** | **-** | **-** |
| Belém | 1.12ns | 1.98ns | 5.21\* | 0.4128 | **-** | **-** | **-** |
| Cametá | 1.65\* | 1.56ns | 4.12\* | 0.3621 | **-** | **-** | **-** |
| Conceição do Araguaia | 1.74\* | 2.05ns | 5.06\* | 0.3794 | **-** | **-** | **-** |
| Itaituba | 0.3612\*\* | 1.41ns | 7.01ns | 0.5123 | **-** | **-** | **-** |
| Marabá | 1.32\* | 0.8961ns | 5.32ns | 0.5232 | **-** | **-** | **-** |
| Monte Alegre | 1.55\* | 0.9962ns | 3.14ns | 0.5123 | **-** | **-** | **-** |
| Óbidos | 1.89\* | 0.8721ns | 5.18ns | 0.4896 | **-** | **-** | **-** |
| Soure | 0.6541\* | 1.55ns | 3.25ns | 0.4562 | **-** | **-** | **-** |
| Tucuruí | 0.8759\* | 1.23ns | 4.78ns | 0.3987 | **-** | **-** | **-** |
| Boa Vista | 0.7723\* | 1.75ns | 2.14ns | 0.4121 | **-** | **-** | **-** |

Table 12. Coefficients of the model 5 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.5669\* | -11.34\* | 17.16\* | 0.7475 | 0.080 | 2.48 | 0.9194 |
| Macapá | 0.3219\* | -2.43ns | 18.44\* | 0.8831 | **-** | **-** | **-** |
| Barcelos | 0.5364\* | -8.97\* | 17.22\* | 0.7645 | 0.041 | 2.54 | 0.9293 |
| Eirunepé | 0.4522\* | -6.12\* | 16.28\* | 0.7065 | 0.138 | 2.18 | 0.9162 |
| Itacoatiara | 0.5209\* | -10.66\* | 16.62\* | 0.8020 | 0.037 | 2.29 | 0.9411 |
| Lábrea | 0.6439\* | -12.13\* | 14.26\* | 0.7362 | 0.038 | 2.05 | 0.9115 |
| Manaus | 0.3228\* | -2.86\* | 16.60\* | 0.7753 | 0.103 | 2.29 | 0.9396 |
| Parintins | 0.6904\* | -16.54\* | 18.00\* | 0.8685 | -0.037 | 1.99 | 0.9614 |
| S. G. da Cachoeira | 0.4703\* | -8.56\* | 17.22\* | 0.7522 | 0.070 | 2.39 | 0.9257 |
| Sinop | 0.5915\* | -9.81\* | 15.23\* | 0.6210 | 0.079 | 2.67 | 0.8669 |
| Belém | 0.2680\* | -1.65ns | 13.05\* | 0.6607 | - | - | - |
| Cametá | 0.5523\* | -9.95\* | 16.28\* | 0.8301 | 0.019 | 1.63 | 0.9446 |
| Conceição do Araguaia | 0.6596\* | -15.07\* | 17.23\* | 0.7974 | -0.082 | 2.01 | 0.9421 |
| Itaituba | 0.5772\* | -10.79\* | 16.85\* | 0.8533 | 0.114 | 1.77 | 0.9613 |
| Marabá | 0.5255\* | -8.54\* | 14.90\* | 0.7753 | -0.074 | 1.84 | 0.9323 |
| Monte Alegre | 0.5154\* | -8.85\* | 17.27\* | 0.8895 | 0.030 | 1.34 | 0.9721 |
| Óbidos | 0.4784\* | -8.99\* | 14.83\* | 0.7834 | -0.075 | 2.03 | 0.9396 |
| Soure | 0.4651\* | -4.61\* | 13.35\* | 0.8169 | -0.111 | 1.90 | 0.9435 |
| Tucuruí | 0.6884\* | -14.86\* | 13.40\* | 0.6908 | -0.077 | 1.99 | 0.8979 |
| Boa Vista | 0.3969\* | -3.47\* | 15.84\* | 0.8409 | 0.062 | 1.78 | 0.9535 |

Table 13. Coefficients of the model 6 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Índices Estatísticos | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 4.01ns | 0.1453\* | 0.4723 | **-** | **-** | **-** |
| Macapá | 3.25ns | 0.5623\* | 0.5874 | **-** | **-** | **-** |
| Barcelos | 3.14ns | 0.1421\* | 0.4521 | **-** | **-** | **-** |
| Eirunepé | 2.31ns | 0.6514ns | 0.3625 | **-** | **-** | **-** |
| Itacoatiara | 5.01ns | 0.8954ns | 0.4121 | **-** | **-** | **-** |
| Lábrea | 2.14ns | 0.6231\* | 0.4214 | **-** | **-** | **-** |
| Manaus | 1.25\* | 0.4236ns | 0.3874 | **-** | **-** | **-** |
| Parintins | 2.36\* | 0.2145ns | 0.4231 | **-** | **-** | **-** |
| S. G. da Cachoeira | 3.65ns | 0.1263\* | 0.4031 | **-** | **-** | **-** |
| Sinop | 4.25ns | 0.1021\*\* | 0.5410 | **-** | **-** | **-** |
| Belém | 0.9874ns | 0.6547\* | 0.6012 | **-** | **-** | **-** |
| Cametá | 0.7521ns | 1.06ns | 0.4561 | **-** | **-** | **-** |
| Conceição do Araguaia | 2.03ns | 0.6214ns | 0.4123 | **-** | **-** | **-** |
| Itaituba | 3.14ns | 0.3121ns | 0.3124 | **-** | **-** | **-** |
| Marabá | 0.8721ns | 1.65ns | 0.3987 | **-** | **-** | **-** |
| Monte Alegre | 0.9214\* | 1.23ns | 0.2378 | **-** | **-** | **-** |
| Óbidos | 2.36ns | 0.2314ns | 0.3214 | **-** | **-** | **-** |
| Soure | 3.14ns | 0.3687ns | 0.4214 | **-** | **-** | **-** |
| Tucuruí | 1.05ns | 0.7845ns | 0.2415 | **-** | **-** | **-** |
| Boa Vista | 1.78ns | 0.2315ns | 0.3674 | **-** | **-** | **-** |

Table 14. Coefficients of the model 7 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Índices Estatísticos | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0028ns | 0.2894\* | 0.7235 | - | - | - |
| Macapá | -0.0041ns | 0.3002\* | 0.8497 | - | - | - |
| Barcelos | 0.0150\*\* | 0.3005\* | 0.7221 | 0.036 | 2.80 | 0.9107 |
| Eirunepé | 0.0063ns | 0.2992\* | 0.6700 | - | - | - |
| Itacoatiara | -0.0249\* | 0.2818\* | 0.7723 | 0.040 | 2.48 | 0.9292 |
| Lábrea | 0.0981\* | 0.2408\* | 0.7069 | 0.059 | 2.12 | 0.8980 |
| Manaus | -0.0170\* | 0.2884\* | 0.7453 | 0.098 | 2.45 | 0.9306 |
| Parintins | -0.0163\* | 0.2905\* | 0.8284 | -0.048 | 2.22 | 0.9497 |
| S. G. da Cachoeira | -0.0464\* | 0.3068\* | 0.7211 | 0.097 | 2.55 | 0.9125 |
| Sinop | 0.1032\* | 0.2550\* | 0.6148 | 0.092 | 2.73 | 0.8565 |
| Belém | 0.0249\* | 0.2237\* | 0.6530 | -0.080 | 2.12 | 0.8911 |
| Cametá | 0.0648\* | 0.2589\* | 0.7986 | 0.010 | 1.76 | 0.9346 |
| Conceição do Araguaia | 0.0361\* | 0.2642\* | 0.7586 | -0.030 | 2.16 | 0.9289 |
| Itaituba | 0.0417\* | 0.2767\* | 0.8076 | 0.123 | 2.06 | 0.9457 |
| Marabá | 0.0787\* | 0.2464\* | 0.7385 | -0.077 | 1.98 | 0.9191 |
| Monte Alegre | 0.0421\* | 0.2755\* | 0.8525 | 0.027 | 1.55 | 0.9618 |
| Óbidos | 0.0202\* | 0.2429\* | 0.7632 | -0.094 | 2.14 | 0.9314 |
| Soure | 0.1462\* | 0.2184\* | 0.7831 | -0.122 | 2.04 | 0.9336 |
| Tucuruí | 0.1047\* | 0.2125\* | 0.6662 | -0.049 | 2.09 | 0.8801 |
| Boa Vista | 0.0811\* | 0.2583\* | 0.8109 | 0.053 | 1.93 | 0.9442 |

Table 15. Coefficients of the model 8 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Índices Estatísticos | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2966\* | 0.9667\* | 0.7243 | 0.141 | 2.58 | 0.9073 |
| Macapá | 0.3029\* | 0.9771\* | 0.8501 | 0.078 | 2.04 | 0.9578 |
| Barcelos | 0.3202\* | 0.9362\* | 0.7245 | 0.078 | 2.80 | 0.9083 |
| Eirunepé | 0.3094\* | 0.9542\* | 0.6716 | 0.144 | 2.33 | 0.8972 |
| Itacoatiara | 0.2641\* | 1.02\* | 0.7706 | 0.074 | 2.49 | 0.9265 |
| Lábrea | 0.3372\* | 0.7791\* | 0.7157 | 0.073 | 2.10 | 0.8994 |
| Manaus | 0.2773\* | 1.01\* | 0.7444 | 0.128 | 2.46 | 0.9283 |
| Parintins | 0.2823\* | 0.9966\* | 0.8276 | 0.004 | 2.23 | 0.9480 |
| S. G. da Cachoeira | 0.2683\* | 1.07\* | 0.7176 | 0.138 | 2.57 | 0.9082 |
| Sinop | 0.3547\* | 0.7908\* | 0.6200 | 0.097 | 2.71 | 0.8591 |
| Belém | 0.2479\* | 0.9296\* | 0.6537 | -0.076 | 2.13 | 0.8904 |
| Cametá | 0.3233\* | 0.8521\* | 0.8045 | 0.021 | 1.74 | 0.9355 |
| Conceição do Araguaia | 0.3029\* | 0.9000\* | 0.7634 | -0.008 | 2.13 | 0.9289 |
| Itaituba | 0.3215\* | 0.8869\* | 0.8133 | 0.146 | 2.04 | 0.9455 |
| Marabá | 0.3243\* | 0.8190\* | 0.7480 | -0.062 | 1.94 | 0.9209 |
| Monte Alegre | 0.3198\* | 0.8935\* | 0.8566 | 0.042 | 1.53 | 0.9622 |
| Óbidos | 0.2656\* | 0.9307\* | 0.7650 | -0.073 | 2.13 | 0.9309 |
| Soure | 0.3605\* | 0.7022\* | 0.7948 | -0.106 | 1.99 | 0.9366 |
| Tucuruí | 0.3127\* | 0.7620\* | 0.6724 | -0.046 | 2.06 | 0.8828 |
| Boa Vista | 0.3371\* | 0.8274\* | 0.8157 | 0.068 | 1.90 | 0.9449 |

Table 16. Coefficients of the model 9 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Índices Estatísticos | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.5612ns | 0.6514ns | 0.5121 | - | - | - |
| Macapá | 0.7116\* | 0.3920\* | 0.8246 | -0.124 | 2.07 | 0.9621 |
| Barcelos | 0.6654\* | 0.2805\* | 0.6365 | -0.642 | 3.20 | 0.9202 |
| Eirunepé | 0.6145\* | 0.2547\* | 0.4537 | -0.591 | 3.22 | 0.8799 |
| Itacoatiara | 0.6205\* | 0.3626\* | 0.7012 | -0.461 | 2.79 | 0.9304 |
| Lábrea | 0.6170\* | 0.2373\* | 0.3436 | -0.282 | 3.05 | 0.8449 |
| Manaus | 0.6373\* | 0.3561\* | 0.6503 | -0.396 | 2.97 | 0.9188 |
| Parintins | 0.6741\* | 0.3958\* | 0.8203 | -0.191 | 2.38 | 0.9511 |
| S. G. da Cachoeira | 0.6153\* | 0.3466\* | 0.6478 | -0.460 | 2.95 | 0.9112 |
| Sinop | 0.6766\* | 0.2770\* | 0.3591 | -0.334 | 3.19 | 0.8622 |
| Belém | 0.5397\* | 0.3649\* | 0.5500 | -0.254 | 2.49 | 0.8658 |
| Cametá | 0.6833\* | 0.3761\* | 0.7751 | -0.072 | 1.77 | 0.9416 |
| Conceição do Araguaia | 0.6685\* | 0.3695\* | 0.7277 | -0.362 | 2.48 | 0.9270 |
| Itaituba | 0.6812\* | 0.3329\* | 0.7539 | -0.347 | 2.16 | 0.9552 |
| Marabá | 0.6458\* | 0.3036\* | 0.5985 | -0.455 | 2.60 | 0.9011 |
| Monte Alegre | 0.7024\* | 0.3874\* | 0.8331 | -0.169 | 1.78 | 0.9582 |
| Óbidos | 0.5950\* | 0.3715\* | 0.6681 | -0.395 | 2.67 | 0.9151 |
| Soure | 0.6598\* | 0.2392\* | 0.5762 | -0.555 | 2.72 | 0.9158 |
| Tucuruí | 0.5884\* | 0.2924\* | 0.5385 | -0.276 | 2.37 | 0.8755 |
| Boa Vista | 0.6813\* | 0.3336\* | 0.7563 | -0.127 | 2.21 | 0.9375 |

Table 17. Coefficients of the model 10 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2122\* | 0.4784\* | 0.7003\* | 0.772 | 0.082 | 2.32 | 0.9307 |
| Macapá | 0.1995\* | 0.5380\* | 0.7178\* | 0.8958 | 0.072 | 1.69 | 0.9722 |
| Barcelos | 0.2142\* | 0.4846\* | 0.5639\* | 0.8045 | 0.042 | 2.26 | 0.9470 |
| Eirunepé | 0.2233\* | 0.4343\* | 0.5737\* | 0.758 | 0.115 | 2.00 | 0.9339 |
| Itacoatiara | 0.1817\* | 0.4678\* | 0.6911\* | 0.8221 | 0.025 | 2.16 | 0.9489 |
| Lábrea | 0.2769\* | 0.3842\* | 0.6852\* | 0.7606 | 0.114 | 2.01 | 0.9105 |
| Manaus | 0.2041\* | 0.4737\* | 0.7516\* | 0.7846 | 0.079 | 2.25 | 0.9430 |
| Parintins | 0.1672\* | 0.5270\* | 0.6562\* | 0.8933 | 0.062 | 1.91 | 0.9643 |
| S. G. da Cachoeira | 0.1825\* | 0.4718\* | 0.6701\* | 0.7713 | 0.040 | 2.29 | 0.9335 |
| Sinop | 0.3103\* | 0.4191\* | 0.8520\* | 0.6359 | 0.074 | 2.58 | 0.8793 |
| Belém | 0.2171\* | 0.3681\* | 0.9748\* | 0.6563 | -0.092 | 2.16 | 0.8882 |
| Cametá | 0.2159\* | 0.4893\* | 0.7101\* | 0.8452 | 0.021 | 1.54 | 0.9509 |
| Conceição do Araguaia | 0.1970\* | 0.4940\* | 0.6848\* | 0.8221 | -0.090 | 1.90 | 0.9491 |
| Itaituba | 0.2113\* | 0.4940\* | 0.6286\* | 0.887 | 0.057 | 1.48 | 0.9743 |
| Marabá | 0.2355\* | 0.4382\* | 0.6629\* | 0.8081 | -0.090 | 1.74 | 0.9419 |
| Monte Alegre | 0.2055\* | 0.5173\* | 0.6947\* | 0.9029 | 0.009 | 1.26 | 0.9760 |
| Óbidos | 0.1968\* | 0.4229\* | 0.7587\* | 0.794 | -0.053 | 2.00 | 0.9415 |
| Soure | 0.2780\* | 0.4029\* | 0.6001\* | 0.8422 | -0.103 | 1.72 | 0.9545 |
| Tucuruí | 0.2549\* | 0.3692\* | 0.7780\* | 0.6905 | -0.071 | 1.96 | 0.8979 |
| Boa Vista | 0.2453\* | 0.4656\* | 0.7138\* | 0.8429 | 0.054 | 1.77 | 0.9546 |

Table 18. Coefficients of the model 11 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | Índices Estatísticos | | |
| a | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2536ns | 0.2345 | - | - | - |
| Macapá | 0.1436ns | 0.3214 | - | - | - |
| Barcelos | 0.7426ns | 0.1968 | - | - | - |
| Eirunepé | 1.21ns | 0.2364 | - | - | - |
| Itacoatiara | 0.3214ns | 0.3321 | - | - | - |
| Lábrea | 0.5618ns | 0.1574 | - | - | - |
| Manaus | 0.6941ns | 0.2114 | - | - | - |
| Parintins | 0.7123ns | 0.2564 | - | - | - |
| S. G. da Cachoeira | 0.6123ns | 0.2432 | - | - | - |
| Sinop | 0.3214ns | 0.3214 | - | - | - |
| Belém | 0.2131ns | 0.2131 | - | - | - |
| Cametá | 0.1421ns | 0.1987 | - | - | - |
| Conceição do Araguaia | 0.7418ns | 0.4231 | - | - | - |
| Itaituba | 0.8512ns | 0.3547 | - | - | - |
| Marabá | 0.3621ns | 0.2147 | - | - | - |
| Monte Alegre | 0.1432ns | 0.3614 | - | - | - |
| Óbidos | 0.4562ns | 0.2561 | - | - | - |
| Soure | 0.9812ns | 0.2132 | - | - | - |
| Tucuruí | 1.05ns | 0.3214 | - | - | - |
| Boa Vista | 1.12ns | 0.2341 | - | - | - |

Table 19. Coefficients of the model 12 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.5069\* | -0.2689\* | 0.8911\* | 0.7667 | 0.061 | 2.36 | 0.9279 |
| Macapá | 0.5180\* | -0.2948\* | 0.9963\* | 0.8948 | 0.054 | 1.70 | 0.9720 |
| Barcelos | 0.7355\* | -0.4804\* | 1.21\* | 0.7916 | 0.074 | 2.33 | 0.9423 |
| Eirunepé | 0.7912\* | -0.5353\* | 1.23\* | 0.7446 | 0.140 | 2.01 | 0.9317 |
| Itacoatiara | 0.5107\* | -0.3080\* | 0.9453\* | 0.8186 | 0.032 | 2.17 | 0.9477 |
| Lábrea | 0.5876\* | -0.2934\* | 0.8339\* | 0.7568 | 0.093 | 2.02 | 0.9106 |
| Manaus | 0.4452\* | -0.2229\* | 0.8198\* | 0.7818 | 0.081 | 2.27 | 0.9418 |
| Parintins | 0.5242\* | -0.3236\* | 1.02\* | 0.8871 | 0.046 | 1.95 | 0.9632 |
| S. G. da Cachoeira | 0.5868\* | -0.3798\* | 1.04\* | 0.7663 | 0.040 | 2.29 | 0.9327 |
| Sinop | 0.4116\* | -0.0896\* | 0.5566\* | 0.6344 | 0.075 | 2.59 | 0.8773 |
| Belém | 0.1544\* | 0.0746\* | 0.2456\* | 0.6574 | -0.088 | 2.14 | 0.8902 |
| Cametá | 0.4815\* | -0.2370\* | 0.8493\* | 0.8433 | 0.016 | 1.55 | 0.9502 |
| Conceição do Araguaia | 0.4750\* | -0.2461\* | 0.8712\* | 0.8165 | -0.104 | 1.91 | 0.9483 |
| Itaituba | 0.6550\* | -0.4139\* | 1.13\* | 0.8846 | 0.067 | 1.51 | 0.9731 |
| Marabá | 0.5196\* | -0.2544\* | 0.8270\* | 0.7999 | -0.085 | 1.77 | 0.9395 |
| Monte Alegre | 0.5172\* | -0.2818\* | 0.9485\* | 0.9007 | 0.013 | 1.27 | 0.9754 |
| Óbidos | 0.3637\* | -0.1477\* | 0.6506\* | 0.7902 | -0.046 | 2.01 | 0.9412 |
| Soure | 0.5568\* | -0.2428\* | 0.7716\* | 0.8306 | -0.111 | 1.82 | 0.9488 |
| Tucuruí | 0.3604\* | -0.0828\* | 0.4894\* | 0.6872 | -0.066 | 1.98 | 0.8956 |
| Boa Vista | 0.4657\* | -0.1870\* | 0.7422\* | 0.8388 | 0.055 | 1.80 | 0.9531 |

Table 20. Coefficients of the model 13 Group I adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Índices Estatísticos | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.4955\* | -8.75\* | 1.43\* | 0.7534 | 0.075 | 2.46 | 0.9214 |
| Macapá | 0.3219\* | -2.44ns | 1.54\* | 0.8831 | - | - | - |
| Barcelos | 0.5365\* | -8.97\* | 1.44\* | 0.7645 | 0.041 | 2.54 | 0.9293 |
| Eirunepé | 0.4165\* | -4.84\* | 1.36\* | 0.7102 | 0.136 | 2.16 | 0.9177 |
| Itacoatiara | 0.4858\* | -9.40\* | 1.39\* | 0.8029 | 0.036 | 2.29 | 0.9414 |
| Lábrea | 0.5976\* | -10.47\* | 1.20\* | 0.7413 | 0.041 | 2.03 | 0.9133 |
| Manaus | 0.2898\* | -1.68\* | 1.39\* | 0.7755 | 0.102 | 2.29 | 0.9396 |
| Parintins | 0.6619\* | -15.51\* | 1.50\* | 0.8691 | -0.036 | 1.99 | 0.9615 |
| S. G. da Cachoeira | 0.4704\* | -8.56\* | 1.44\* | 0.7522 | 0.070 | 2.39 | 0.9257 |
| Sinop | 0.5104\* | -6.79\* | 1.26\* | 0.6268 | 0.079 | 2.64 | 0.8703 |
| Belém | 0.2564\* | -1.23ns | 1.09\* | 0.6614 | - | - | - |
| Cametá | 0.5205\* | -8.81\* | 1.36\* | 0.8311 | 0.019 | 1.63 | 0.9449 |
| Conceição do Araguaia | 0.5732\* | -11.89\* | 1.43\* | 0.8021 | -0.085 | 1.98 | 0.9438 |
| Itaituba | 0.5282\* | -9.02\* | 1.40\* | 0.8551 | 0.113 | 1.76 | 0.9620 |
| Marabá | 0.4740\* | -6.66\* | 1.24\* | 0.7785 | -0.075 | 1.83 | 0.9332 |
| Monte Alegre | 0.4815\* | -7.61\* | 1.44\* | 0.8883 | 0.029 | 1.35 | 0.9718 |
| Óbidos | 0.4279\* | -7.17\* | 1.24\* | 0.7854 | -0.071 | 2.02 | 0.9402 |
| Soure | 0.4651\* | -4.61\* | 1.11\* | 0.8169 | -0.111 | 1.90 | 0.9435 |
| Tucuruí | 0.6558\* | -13.68\* | 1.12\* | 0.6921 | -0.076 | 1.98 | 0.8985 |
| Boa Vista | 0.3736\* | -2.63\* | 1.32\* | 0.8388 | 0.062 | 1.78 | 0.9530 |

**GROUP II**

Table 21. Coefficients of the model 14 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | Statistical indices | | |
| a | R^2 | MBE | RMSE | d |
| Rio Branco | 0.1565\* | 0.5087 | 0.167 | 3.30 | 0.7913 |
| Macapá | 0.2002\* | 0.4609 | 0.252 | 3.90 | 0.7185 |
| Barcelos | 0.1603\* | 0.5100 | 0.313 | 3.73 | 0.7730 |
| Eirunepé | 0.1439\* | 0.5297 | 0.197 | 2.91 | 0.7873 |
| Itacoatiara | 0.1668\* | 0.4802 | 0.236 | 3.75 | 0.7354 |
| Lábrea | 0.1530\* | 0.4864 | 0.189 | 2.88 | 0.7388 |
| Manaus | 0.1638\* | 0.3496 | 0.260 | 4.09 | 0.6606 |
| Parintins | 0.1883\* | 0.4494 | 0.467 | 4.03 | 0.7111 |
| S. G. da Cachoeira | 0.1519\* | 0.6692 | 0.366 | 2.91 | 0.8429 |
| Sinop | 0.1562\* | 0.3545 | 0.067 | 3.44 | 0.7401 |
| Belém | 0.1395\* | 0.2432 | 0.019 | 3.19 | 0.5638 |
| Cametá | 0.1959\* | 0.2557 | -0.148 | 3.25 | 0.5913 |
| Conceição do Araguaia | 0.1548\* | 0.4956 | 0.167 | 3.21 | 0.7805 |
| Itaituba | 0.1782\* | 0.5053 | 0.156 | 3.46 | 0.7566 |
| Marabá | 0.1648\* | 0.4818 | 0.034 | 2.81 | 0.7557 |
| Monte Alegre | 0.2064\* | 0.3715 | -0.036 | 3.36 | 0.6910 |
| Óbidos | 0.1450\* | 0.4922 | 0.153 | 3.12 | 0.7783 |
| Soure | 0.7523ns | 0.1974 | - | - | - |
| Tucuruí | 0.1655\* | 0.2713 | -0.166 | 2.94 | 0.6790 |
| Boa Vista | 0.1734\* | 0.5305 | 0.241 | 3.01 | 0.7976 |

Table 22. Coefficients of the model 15 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.6234\* | 0.0231\* | 1.88\* | 0.6231 | -0.117 | 2.86 | 0.8911 |
| Macapá | 0.2145\* | 0.0782ns | 2.78ns | 0.4121 | - | - | - |
| Barcelos | 0.6335\* | 0.0144\* | 2.11\* | 0.6514 | -0.049 | 3.16 | 0.8948 |
| Eirunepé | 0.6246\* | 0.0295\* | 1.67\* | 0.6517 | -0.065 | 2.50 | 0.8938 |
| Itacoatiara | 0.6143\* | 0.0257\* | 1.99\* | 0.6143 | 0.025 | 3.22 | 0.8709 |
| Lábrea | 0.1987ns | 0.1214ns | 3.21\* | 0.3278 | - | - | - |
| Manaus | 0.5828\* | 0.0109\* | 2.43\* | 0.4878 | 0.060 | 3.69 | 0.8198 |
| Parintins | 0.6337\* | 0.0170\* | 2.35\* | 0.5983 | 0.313 | 3.46 | 0.8575 |
| S. G. da Cachoeira | 0.8769\* | 0.0500\* | 1.23\* | 0.7836 | -0.050 | 2.40 | 0.9267 |
| Sinop | 0.6282\* | 0.0239\* | 1.86\* | 0.4686 | -0.051 | 3.06 | 0.8347 |
| Belém | 0.5274\* | 0.0109\* | 2.27\* | 0.3417 | -0.063 | 2.97 | 0.7317 |
| Cametá | 0.1426ns | 0.0987\* | 1.06ns | 0.2314 | - | - | - |
| Conceição do Araguaia | 0.6608\* | 0.0280\* | 1.69\* | 0.5899 | 0.014 | 2.88 | 0.8627 |
| Itaituba | 0.6389\* | 0.0138\* | 2.28\* | 0.6464 | -0.057 | 2.80 | 0.8943 |
| Marabá | 0.1748\* | 0.2141ns | 1.36ns | 0.3121 | - | - | - |
| Monte Alegre | 0.2110\* | 0.1547ns | 3.36ns | 0.2141 | - | - | - |
| Óbidos | 0.5576\* | 0.0058\* | 2.52\* | 0.6271 | 0.002 | 2.73 | 0.8851 |
| Soure | 0.1001\* | 0.0162ns | 1.21ns | 0.3105 | - | - | - |
| Tucuruí | 0.6245\* | 0.0921\* | 1.31\* | 0.2882 | -0.214 | 2.89 | 0.7278 |
| Boa Vista | 0.6723\* | 0.0182\* | 1.99\* | 0.6167 | 0.045 | 2.76 | 0.8794 |

Table 23. Coefficients of the model 16 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -0.2429\* | 0.2344\* | 0.5853 | -0.071 | 2.96 | 0.8748 |
| Macapá | -0.5896\* | 0.4105\* | 0.6363 | 0.039 | 3.23 | 0.8824 |
| Barcelos | -0.3095\* | 0.2607\* | 0.6006 | 0.012 | 3.38 | 0.8689 |
| Eirunepé | -0.2898\* | 0.2382\* | 0.6398 | -0.047 | 2.52 | 0.8891 |
| Itacoatiara | -0.3457\* | 0.2917\* | 0.5942 | 0.008 | 3.29 | 0.8601 |
| Lábrea | -0.1561\* | 0.2020\* | 0.5219 | 0.163 | 2.85 | 0.7852 |
| Manaus | -0.3861\* | 0.2995\* | 0.4529 | 0.085 | 3.76 | 0.8026 |
| Parintins | -0.4021\* | 0.3386\* | 0.5647 | 0.292 | 3.67 | 0.8363 |
| S. G. da Cachoeira | -0.2731\* | 0.2456\* | 0.7807 | -0.036 | 2.42 | 0.9246 |
| Sinop | -0.0096ns | 0.1590\* | 0.3547 | - | - | - |
| Belém | -0.3560\* | 0.2571\* | 0.3289 | -0.052 | 3.00 | 0.7227 |
| Cametá | -0.2238\* | 0.2737\* | 0.2819 | -0.208 | 3.21 | 0.6656 |
| Conceição do Araguaia | -0.1304\* | 0.1925\* | 0.5258 | 0.067 | 3.10 | 0.8286 |
| Itaituba | -0.3148\* | 0.2837\* | 0.5981 | 0.000 | 3.07 | 0.8628 |
| Marabá | -0.2012\* | 0.2289\* | 0.5427 | -0.047 | 2.67 | 0.8301 |
| Monte Alegre | -0.2692\* | 0.3029\* | 0.4179 | -0.126 | 3.26 | 0.7724 |
| Óbidos | -0.2974\* | 0.2368\* | 0.5794 | 0.012 | 2.84 | 0.8684 |
| Soure | -0.1204\* | 0.0921ns | 0.1821 | - | - | - |
| Tucuruí | -0.1042\* | 0.2019\* | 0.2824 | -0.206 | 2.92 | 0.7191 |
| Boa Vista | -0.3127\* | 0.2722\* | 0.5961 | 0.062 | 2.80 | 0.8688 |

Table 24. Coefficients of the model 17 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -0.0612\* | -12.24ns | 1.23\* | 0.2674 | -0.085 | 4.11 | 0.6427 |
| Macapá | -0.0939ns | -69.94ns | 3.38\* | 0.6155 | - | - | - |
| Barcelos | -0.0855ns | -59.03\* | 3.01\* | 0.5114 | - | - | - |
| Eirunepé | -0.2029\* | -16.98\* | 1.54\* | 0.28 | -0.103 | 3.82 | 0.5959 |
| Itacoatiara | 0.0044ns | -51.73\* | 2.48ns | 0.4917 | - | - | - |
| Lábrea | 0.0080ns | -27.63\* | 1.66ns | 0.3149 | - | - | - |
| Manaus | -0.1494\* | -33.89\* | 2.01\* | 0.4302 | -0.056 | 3.71 | 0.7835 |
| Parintins | -0.0994ns | -60.86\* | 3.01ns | 0.6302 | - | - | - |
| S. G. da Cachoeira | 0.4180\* | -33.07\* | 1.25\* | 0.1818 | -0.221 | 4.30 | 0.5539 |
| Sinop | 0.0028ns | -11.99\* | 1.22ns | 0.2363 | - | - | - |
| Belém | -0.2164\* | -21.76\* | 1.63\* | 0.2692 | 0.045 | 3.10 | 0.6415 |
| Cametá | 0.1570\* | -45.45\* | 2.16\* | 0.4236 | 0.059 | 2.94 | 0.7428 |
| Conceição do Araguaia | -0.1997\* | -8.52\* | 1.28\* | 0.2451 | -0.108 | 3.75 | 0.6499 |
| Itaituba | -0.0258ns | -39.92ns | 2.16\* | 0.4594 | - | - | - |
| Marabá | -0.2398\* | -22.24\* | 1.84\* | 0.3238 | 0.017 | 3.26 | 0.6612 |
| Monte Alegre | -0.0801ns | -37.96\* | 2.23ns | 0.467 | - | - | - |
| Óbidos | -0.0023ns | -44.43\* | 2.27ns | 0.545 | - | - | - |
| Soure | 0.1398\* | -69.22\* | 3.03\* | 0.5365 | 0.037 | 2.89 | 0.8331 |
| Tucuruí | 0.1412\* | -34.57\* | 1.73\* | 0.3319 | 0.099 | 2.87 | 0.6944 |
| Boa Vista | -0.2251\* | -32.11\* | 2.14\* | 0.5174 | -0.141 | 3.05 | 0.8195 |

Table 25. Coefficients of the model 18 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.6190\* | 0.9249\* | 1.86\* | 0.6351 | -0.065 | 2.83 | 0.8902 |
| Macapá | 0.7203\* | 0.3776\* | 2.43\* | 0.6612 | 0.047 | 3.08 | 0.8940 |
| Barcelos | 0.6422\* | 0.5481\* | 2.06\* | 0.6634 | -0.033 | 3.11 | 0.8975 |
| Eirunepé | 0.6173\* | 1.11\* | 1.67\* | 0.664 | -0.031 | 2.46 | 0.8949 |
| Itacoatiara | 0.6413\* | 1.10\* | 1.85\* | 0.6348 | 0.059 | 3.13 | 0.8766 |
| Lábrea | 0.5830\* | 0.8291\* | 1.94\* | 0.5782 | 0.233 | 2.67 | 0.8087 |
| Manaus | 0.6125\* | 0.5728\* | 2.18\* | 0.5124 | 0.103 | 3.60 | 0.8251 |
| Parintins | 0.6429\* | 0.6724\* | 2.28\* | 0.6141 | 0.334 | 3.43 | 0.8590 |
| S. G. da Cachoeira | 0.9486\* | 1.68\* | 1.21\* | 0.7908 | -0.043 | 2.37 | 0.9283 |
| Sinop | 0.6286\* | 1.19\* | 1.74\* | 0.472 | -0.012 | 3.06 | 0.8264 |
| Belém | 60.48ns | 0.0304ns | 0.9541\* | 0.3898 | - | - | - |
| Cametá | 0.6138\* | 0.2630\* | 2.82\* | 0.359 | -0.160 | 3.07 | 0.7078 |
| Conceição do Araguaia | 0.6608\* | 1.28\* | 1.60\* | 0.6047 | 0.059 | 2.82 | 0.8635 |
| Itaituba | 0.6460\* | 0.6099\* | 2.17\* | 0.6559 | -0.035 | 2.75 | 0.8963 |
| Marabá | 0.6440\* | 0.9539\* | 1.84\* | 0.6319 | -0.014 | 2.41 | 0.8670 |
| Monte Alegre | 0.6688\* | 0.7405\* | 2.27\* | 0.5088 | -0.081 | 3.03 | 0.8111 |
| Óbidos | 0.5657\* | 0.2664\* | 2.39\* | 0.6388 | 0.033 | 2.68 | 0.8869 |
| Soure | 0.3641ns | 0.9841\* | 1.52ns | 0.3521 | - | - | - |
| Tucuruí | 3.95ns | 1.14ns | 0.6655\* | 0.3542 | - | - | - |
| Boa Vista | 0.7095\* | 0.7257\* | 1.88\* | 0.6435 | 0.068 | 2.66 | 0.8855 |

Table 26. Coefficients of the model 19 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0576\* | 1.08\* | 0.5922 | -0.033 | 2.94 | 0.8759 |
| Macapá | 0.0259\* | 1.67\* | 0.6423 | 0.077 | 3.18 | 0.8851 |
| Barcelos | 0.0444\* | 1.21\* | 0.6132 | 0.073 | 3.33 | 0.8733 |
| Eirunepé | 0.0443\* | 1.14\* | 0.6401 | -0.025 | 2.52 | 0.8882 |
| Itacoatiara | 0.0492\* | 1.24\* | 0.5959 | 0.042 | 3.29 | 0.8591 |
| Lábrea | 0.0763\* | 0.9394\* | 0.5325 | 0.188 | 2.82 | 0.7899 |
| Manaus | 0.0410\* | 1.30\* | 0.4551 | 0.131 | 3.76 | 0.8005 |
| Parintins | 0.0513\* | 1.33\* | 0.5673 | 0.333 | 3.64 | 0.8369 |
| S. G. da Cachoeira | 0.0482\* | 1.16\* | 0.7834 | -0.046 | 2.40 | 0.9263 |
| Sinop | 0.1161\* | 0.7726\* | 0.3848 | 0.083 | 3.34 | 0.7642 |
| Belém | 0.0336\* | 1.25\* | 0.3284 | -0.044 | 3.00 | 0.7210 |
| Cametá | 0.0867\* | 1.07\* | 0.2916 | -0.183 | 3.20 | 0.6679 |
| Conceição do Araguaia | 0.0770\* | 0.9326\* | 0.5458 | 0.107 | 3.03 | 0.8361 |
| Itaituba | 0.0554\* | 1.20\* | 0.6057 | 0.038 | 3.03 | 0.8652 |
| Marabá | 0.0694\* | 1.03\* | 0.5587 | -0.009 | 2.62 | 0.8356 |
| Monte Alegre | 0.0812\* | 1.15\* | 0.4298 | -0.095 | 3.23 | 0.7767 |
| Óbidos | 0.0442\* | 1.13\* | 0.5798 | 0.049 | 2.84 | 0.8661 |
| Soure | 0.0121\* | 0.6012ns | 0.2141 | - | - | - |
| Tucuruí | 0.1083\* | 0.8477\* | 0.2843 | -0.203 | 2.92 | 0.7201 |
| Boa Vista | 0.0500\* | 1.20\* | 0.6011 | 0.081 | 2.79 | 0.8702 |

Table 27. Coefficients of the model 20 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | Statistical indices | | |
| a | R^2 | MBE | RMSE | d |
| Rio Branco | 0.4421\* | 0.5214 | 0.069 | 3.21 | 0.8907 |
| Macapá | 0.8307\* | 0.6544 | 0.045 | 3.11 | 0.8817 |
| Barcelos | 0.4546\* | 0.6337 | 0.036 | 3.27 | 0.8994 |
| Eirunepé | 0.3736\* | 0.5583 | -0.121 | 2.83 | 0.8957 |
| Itacoatiara | 0.6083\* | 0.5959 | 0.047 | 3.25 | 0.8879 |
| Lábrea | 0.4020\* | 0.3152 | 0.565 | 3.36 | 0.8007 |
| Manaus | 0.5490\* | 0.4895 | 0.157 | 3.68 | 0.8362 |
| Parintins | 0.8230\* | 0.5982 | 0.405 | 3.52 | 0.8620 |
| S. G. da Cachoeira | 0.4504\* | 0.7111 | -0.397 | 2.73 | 0.9273 |
| Sinop | 0.4271\* | 0.1394 | 0.820 | 3.83 | 0.8157 |
| Belém | 0.3570\* | 0.3440 | -0.065 | 2.95 | 0.7764 |
| Cametá | 0.7654\* | 0.2985 | -0.070 | 3.21 | 0.7229 |
| Conceição do Araguaia | 0.3855\* | 0.4458 | 0.483 | 3.30 | 0.8688 |
| Itaituba | 0.6040\* | 0.6153 | 0.135 | 2.89 | 0.8991 |
| Marabá | 0.4846\* | 0.5048 | 0.271 | 2.77 | 0.8691 |
| Monte Alegre | 0.9240\* | 0.4900 | 0.002 | 3.07 | 0.8234 |
| Óbidos | 0.3383\* | 0.5519 | 0.119 | 2.98 | 0.8866 |
| Soure | 0.1012ns | 0.1897 | - | - | - |
| Tucuruí | 0.0921ns | 0.1598 | - | - | - |
| Boa Vista | 0.4955\* | 0.6325 | 0.085 | 2.73 | 0.8914 |

Table 28. Coefficients of the model 21 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -0.2599\* | 0.3319\* | 0.5947 | -0.077 | 2.93 | 0.8794 |
| Macapá | -0.4918\* | 0.5132\* | 0.6300 | 0.024 | 3.32 | 0.8758 |
| Barcelos | -0.3289\* | 0.3686\* | 0.6151 | -0.020 | 3.31 | 0.8775 |
| Eirunepé | -0.3017\* | 0.3338\* | 0.6405 | -0.049 | 2.55 | 0.8878 |
| Itacoatiara | -0.2876\* | 0.3712\* | 0.5973 | 0.015 | 3.29 | 0.8616 |
| Lábrea | -0.2320\* | 0.3128\* | 0.5462 | 0.189 | 2.78 | 0.7969 |
| Manaus | -0.3562\* | 0.3957\* | 0.4617 | 0.069 | 3.74 | 0.8071 |
| Parintins | -0.3133\* | 0.4186\* | 0.5749 | 0.311 | 3.60 | 0.8414 |
| S. G. da Cachoeira | -0.1941\* | 0.3008\* | 0.7556 | 0.001 | 2.61 | 0.9114 |
| Sinop | -0.1129\* | 0.2662\* | 0.3938 | 0.038 | 3.29 | 0.7786 |
| Belém | -0.3619\* | 0.3551\* | 0.3277 | -0.054 | 3.01 | 0.7177 |
| Cametá | -0.2409\* | 0.3817\* | 0.3031 | -0.202 | 3.18 | 0.6808 |
| Conceição do Araguaia | -0.2266\* | 0.3104\* | 0.5596 | 0.071 | 2.99 | 0.8438 |
| Itaituba | -0.3079\* | 0.3867\* | 0.6124 | -0.009 | 2.99 | 0.8709 |
| Marabá | -0.2697\* | 0.3468\* | 0.5756 | -0.036 | 2.58 | 0.8449 |
| Monte Alegre | -0.2478\* | 0.4031\* | 0.4375 | -0.120 | 3.22 | 0.7809 |
| Óbidos | -0.3694\* | 0.3593\* | 0.5957 | 0.015 | 2.79 | 0.8739 |
| Soure | -0.1012\* | 0.1205ns | 0.1874 | - | - | - |
| Tucuruí | -0.1102\* | 0.2789\* | 0.2878 | -0.213 | 2.90 | 0.7259 |
| Boa Vista | -0.3718\* | 0.4012\* | 0.6031 | 0.056 | 2.78 | 0.8724 |

Table 29. Coefficients of the model 22 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | Statistical indices | | |
| a | R^2 | MBE | RMSE | d |
| Rio Branco | 0.3070\* | 0.5185 | -0.012 | 3.18 | 0.8857 |
| Macapá | 0.6324\* | 0.6007 | 0.038 | 3.40 | 0.8530 |
| Barcelos | 0.3325\* | 0.5953 | 0.032 | 3.44 | 0.8851 |
| Eirunepé | 0.2663\* | 0.5458 | -0.121 | 2.84 | 0.8919 |
| Itacoatiara | 0.4587\* | 0.5485 | 0.026 | 3.44 | 0.8700 |
| Lábrea | 0.2943\* | 0.3470 | 0.455 | 3.32 | 0.7987 |
| Manaus | 0.4236\* | 0.4071 | 0.151 | 3.97 | 0.8020 |
| Parintins | 0.6215\* | 0.5273 | 0.401 | 3.80 | 0.8340 |
| S. G. da Cachoeira | 0.3292\* | 0.6917 | -0.378 | 2.83 | 0.9209 |
| Sinop | 0.2780\* | 0.2287 | 0.536 | 3.67 | 0.8189 |
| Belém | 0.2699\* | 0.2553 | -0.075 | 3.15 | 0.7407 |
| Cametá | 0.5896\* | 0.1796 | -0.082 | 3.47 | 0.6755 |
| Conceição do Araguaia | 0.2775\* | 0.4366 | 0.337 | 3.37 | 0.8561 |
| Itaituba | 0.4573\* | 0.5797 | 0.091 | 3.06 | 0.8807 |
| Marabá | 0.3523\* | 0.4858 | 0.166 | 2.82 | 0.8582 |
| Monte Alegre | 0.7010\* | 0.3858 | -0.007 | 3.36 | 0.7842 |
| Óbidos | 0.2498\* | 0.5294 | 0.084 | 3.07 | 0.8743 |
| Soure | 0.1232ns | 0.1722 | - | - | - |
| Tucuruí | 0.9871ns | 0.2111 | - | - | - |
| Boa Vista | 0.3831\* | 0.5659 | 0.100 | 2.95 | 0.8706 |

Table 30. Coefficients of the model 23 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 12.11 | 0.5621ns | 0.2114 | - | - | - |
| Macapá | 8.74 | 0.6214ns | 0.2561 | - | - | - |
| Barcelos | 10.09 | 0.4114ns | 0.1987 | - | - | - |
| Eirunepé | 9.05ns | 0.3214\* | 0.3214 | - | - | - |
| Itacoatiara | 11.35ns | 0.3178\* | 0.2654 | - | - | - |
| Lábrea | 9.32ns | 0.5647\* | 0.1562 | - | - | - |
| Manaus | 8.12ns | 0.6528\* | 0.1874 | - | - | - |
| Parintins | 7.89\* | 0.7425ns | 0.2314 | - | - | - |
| S. G. da Cachoeira | 6.89\* | 0.6532ns | 0.2014 | - | - | - |
| Sinop | 10.21\* | 0.4512ns | 0.1874 | - | - | - |
| Belém | 9.45\* | 0.3689ns | 0.3214 | - | - | - |
| Cametá | 12.32ns | 0.6548\* | 0.2687 | - | - | - |
| Conceição do Araguaia | 10.05ns | 0.4321\* | 0.2347 | - | - | - |
| Itaituba | 8.89\* | 0.3698ns | 0.3647 | - | - | - |
| Marabá | 9.21\* | 0.6987ns | 0.2147 | - | - | - |
| Monte Alegre | 7.89\* | 0.7854ns | 0.1896 | - | - | - |
| Óbidos | 12.14\* | 0.8547ns | 0.2314 | - | - | - |
| Soure | 9.21\* | 0.7123ns | 0.2214 | - | - | - |
| Tucuruí | 8.89\* | 0.5641ns | 0.3897 | - | - | - |
| Boa Vista | 10.65\* | 0.4112ns | 0.1562 | - | - | - |

Table 31. Coefficients of the model 24 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -0.5726\* | 0.0333\* | 0.3915 | -0.153 | 3.75 | 0.7881 |
| Macapá | -1.81\* | 0.0744\* | 0.7087 | 0.105 | 2.79 | 0.9169 |
| Barcelos | -1.06\* | 0.0479\* | 0.5853 | 0.024 | 3.29 | 0.8728 |
| Eirunepé | -0.7644\* | 0.0377\* | 0.5025 | -0.055 | 3.08 | 0.8182 |
| Itacoatiara | -1.14\* | 0.0503\* | 0.6424 | -0.003 | 3.18 | 0.8774 |
| Lábrea | -0.7527\* | 0.0376\* | 0.4677 | 0.120 | 2.95 | 0.7866 |
| Manaus | -1.02\* | 0.0456\* | 0.482 | 0.008 | 3.53 | 0.8312 |
| Parintins | -1.35\* | 0.0589\* | 0.6703 | 0.208 | 3.17 | 0.8897 |
| S. G. da Cachoeira | -1.07\* | 0.0476\* | 0.6835 | -0.085 | 2.67 | 0.9047 |
| Sinop | -0.3817\* | 0.0282\* | 0.2306 | -0.071 | 3.72 | 0.7123 |
| Belém | -1.09\* | 0.0462\* | 0.3416 | -0.089 | 2.95 | 0.7332 |
| Cametá | -1.51\* | 0.0639\* | 0.5423 | -0.101 | 2.57 | 0.8317 |
| Conceição do Araguaia | -0.6946\* | 0.0362\* | 0.4191 | -0.026 | 3.38 | 0.8059 |
| Itaituba | -1.01\* | 0.0468\* | 0.5812 | -0.066 | 3.08 | 0.8637 |
| Marabá | -0.9959\* | 0.0466\* | 0.5313 | -0.036 | 2.72 | 0.8322 |
| Monte Alegre | -0.9919\* | 0.0492\* | 0.4952 | -0.122 | 3.15 | 0.8037 |
| Óbidos | -0.7662\* | 0.0369\* | 0.548 | 0.014 | 2.90 | 0.8614 |
| Soure | -2.24\* | 0.0902\* | 0.4924 | -0.148 | 3.02 | 0.8210 |
| Tucuruí | -0.6428\* | 0.0353\* | 0.3423 | -0.169 | 2.85 | 0.7427 |
| Boa Vista | -0.7318\* | 0.0377\* | 0.5707 | 0.090 | 2.93 | 0.8549 |

Table 32. Coefficients of the model 25 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -0.3427\* | 0.5641\* | 0.3911 | 0.019 | 3.61 | 0.7606 |
| Macapá | -1.71\* | 1.71\* | 0.5369 | 0.024 | 3.61 | 0.8387 |
| Barcelos | -0.1637\* | 0.4542\* | 0.2754 | 0.171 | 4.67 | 0.6157 |
| Eirunepé | -0.5596\* | 0.6965\* | 0.5222 | 0.024 | 2.85 | 0.8388 |
| Itacoatiara | -1.15\* | 1.22\* | 0.5038 | -0.012 | 3.61 | 0.8158 |
| Lábrea | -0.2658\* | 0.5133\* | 0.3793 | 0.085 | 3.14 | 0.6963 |
| Manaus | -1.05\* | 1.13\* | 0.3298 | 0.122 | 4.20 | 0.7189 |
| Parintins | -1.30\* | 1.39\* | 0.4279 | 0.290 | 4.22 | 0.7588 |
| S. G. da Cachoeira | -0.8922\* | 0.9678\* | 0.7365 | -0.026 | 2.64 | 0.9055 |
| Sinop | 0.0500\* | 0.2996\* | 0.1993 | 0.124 | 3.89 | 0.5952 |
| Belém | -0.8651\* | 0.9247\* | 0.2707 | -0.040 | 3.13 | 0.6840 |
| Cametá | -0.5260\* | 0.3690ns | 0.2123 | - | - | - |
| Conceição do Araguaia | -0.1054\* | 0.4012\* | 0.3448 | 0.069 | 3.62 | 0.7144 |
| Itaituba | -0.9226\* | 1.05\* | 0.4926 | 0.030 | 3.49 | 0.8025 |
| Marabá | -0.3483\* | 0.5937\* | 0.3734 | -0.083 | 3.09 | 0.7361 |
| Monte Alegre | -0.8868\* | 1.10\* | 0.2795 | -0.131 | 3.54 | 0.6864 |
| Óbidos | -0.7007\* | 0.7962\* | 0.5211 | 9.334 | 9.96 | 0.4888 |
| Soure | -0.4014\* | 0.3697ns | 0.2314 | - | - | - |
| Tucuruí | -0.4829\* | 0.7054\* | 0.2044 | -0.204 | 3.07 | 0.6576 |
| Boa Vista | -0.7790\* | 0.9302\* | 0.5024 | 0.093 | 3.07 | 0.8217 |

Table 33. Coefficients of the model 26 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -1.82\* | 2.46\* | -0.5985\* | 0.5183 | -0.008 | 3.18 | 0.8417 |
| Macapá | -9.72\* | 14.05\* | -4.73\* | 0.5789 | 0.025 | 3.54 | 0.8519 |
| Barcelos | -1.20\* | 1.55\* | -0.2525\* | 0.5085 | 0.066 | 3.75 | 0.8193 |
| Eirunepé | -2.42\* | 3.22\* | -0.8468\* | 0.6064 | -0.020 | 2.60 | 0.8793 |
| Itacoatiara | -6.27\* | 9.06\* | -2.99\* | 0.5445 | 0.042 | 3.49 | 0.8366 |
| Lábrea | -3.23\* | 4.47\* | -1.30\* | 0.5308 | 0.183 | 2.81 | 0.7896 |
| Manaus | -7.49\* | 10.84\* | -3.64\* | 0.4011 | 0.086 | 4.01 | 0.7653 |
| Parintins | -10.32\* | 15.41\* | -5.43\* | 0.5066 | 0.294 | 3.92 | 0.7988 |
| S. G. da Cachoeira | -2.56\* | 3.48\* | -0.9346\* | 0.7519 | -0.005 | 2.59 | 0.9108 |
| Sinop | -1.34\* | 1.93\* | -0.4662\* | 0.3773 | 0.055 | 3.45 | 0.7447 |
| Belém | -5.39\* | 7.56\* | -2.42\* | 0.3022 | -0.047 | 3.07 | 0.6977 |
| Cametá | -5.92\* | 8.89\* | -3.02\* | 0.1832 | -0.197 | 3.40 | 0.5814 |
| Conceição do Araguaia | -1.85\* | 2.52\* | -0.6284\* | 0.5206 | 0.069 | 3.13 | 0.8237 |
| Itaituba | -6.37\* | 9.06\* | -2.93\* | 0.5843 | -0.020 | 3.08 | 0.8606 |
| Marabá | -3.26\* | 4.48\* | -1.28\* | 0.533 | -0.065 | 2.69 | 0.8261 |
| Monte Alegre | -9.67\* | 14.51\* | -5.10\* | 0.3578 | -0.087 | 3.45 | 0.7234 |
| Óbidos | -4.82\* | 6.51\* | -1.97\* | 0.5881 | 0.029 | 2.85 | 0.8680 |
| Soure | -1.23\* | 3.78ns | -0.9874ns | 0.2014 | - | - | - |
| Tucuruí | -3.34\* | 4.95\* | -1.57\* | 0.2176 | -0.219 | 3.02 | 0.6794 |
| Boa Vista | -6.02\* | 8.39\* | -2.64\* | 0.5581 | 0.072 | 2.91 | 0.8540 |

Table 34. Coefficients of the model 27 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | -5.10\* | 8.23\* | -3.85\* | 0.5824\* | 0.571 | -0.033 | 3.05 | 0.8629 |
| Macapá | 46.05\* | -115.74\* | 95.62\* | -25.79\* | 0.5942 | 0.056 | 3.43 | 0.8601 |
| Barcelos | -3.20\* | 4.63\* | -1.67\* | 0.1774\* | 0.6037 | -0.023 | 3.43 | 0.8664 |
| Eirunepé | -5.51\* | 9.10\* | -4.50\* | 0.7409\* | 0.6198 | -0.046 | 2.58 | 0.8831 |
| Itacoatiara | 14.76\* | -39.11\* | 33.65\* | -9.25\* | 0.5522 | 0.064 | 3.47 | 0.8402 |
| Lábrea | -7.07\* | 12.04\* | -6.23\* | 1.05\* | 0.5367 | 0.200 | 2.78 | 0.7925 |
| Manaus | -6.49\* | 8.62ns | -2.01ns | -0.3971ns | 0.4012 | - | - | - |
| Parintins | 1.56ns | -12.21ns | 15.88ns | -5.46ns | 0.5082 | - | - | - |
| S. G. da Cachoeira | 0.4439ns | -3.28ns | 4.08\* | -1.23\* | 0.7527 | - | - | - |
| Sinop | -4.76\* | 7.77\* | -3.70\* | 0.5829\* | 0.4443 | 0.015 | 3.24 | 0.7994 |
| Belém | 16.28\* | -40.72\* | 33.30\* | -8.78\* | 0.3101 | -0.048 | 3.06 | 0.7044 |
| Cametá | -31.49\* | 63.30\* | -41.38\* | 8.95\* | 0.221 | -0.196 | 3.38 | 0.6063 |
| Conceição do Araguaia | -5.15\* | 8.48\* | -4.14\* | 0.6759\* | 0.5537 | 0.053 | 3.03 | 0.8381 |
| Itaituba | -6.43\* | 9.18\* | -3.01ns | 0.0214ns | 0.5843 | - | - | - |
| Marabá | -7.97\* | 13.81\* | -7.37\* | 1.31\* | 0.5464 | -0.056 | 2.66 | 0.8326 |
| Monte Alegre | -2.74ns | -1.22ns | 6.77ns | -2.98ns | 0.3584 | - | - | - |
| Óbidos | -2.94ns | 2.54ns | 0.8100ns | -0.6441ns | 0.5883 | - | - | - |
| Soure | -2.86ns | 1.22ns | 2.55\* | 2.15ns | 0.4236 | - | - | - |
| Tucuruí | -12.16\* | 24.63ns | -16.16ns | 3.59ns | 0.2185 | - | - | - |
| Boa Vista | -1.31ns | -1.71ns | 4.55ns | -1.70ns | 0.5587 | - | - | - |

Table 35. Coefficients of the model 28 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -1.06\* | 0.0121ns | 0.1782 | - | - | - |
| Macapá | -2.00\* | 0.0927\* | 0.5936 | 0.084 | 3.30 | 0.8724 |
| Barcelos | -1.65\* | 0.0809\* | 0.4914 | 0.078 | 3.70 | 0.8183 |
| Eirunepé | -0.5130\* | 0.0363\* | 0.1606 | 0.008 | 4.11 | 0.5565 |
| Itacoatiara | -1.38\* | 0.0671\* | 0.4647 | -0.054 | 3.87 | 0.7891 |
| Lábrea | -0.7474\* | 0.0458\* | 0.2194 | -0.083 | 3.27 | 0.7059 |
| Manaus | -1.04\* | 0.0540\* | 0.3714 | -0.006 | 3.90 | 0.7650 |
| Parintins | -1.69\* | 0.0803\* | 0.5908 | 0.095 | 3.49 | 0.8586 |
| S. G. da Cachoeira | -0.5013\* | 0.0349\* | 0.1835 | 0.219 | 4.29 | 0.5564 |
| Sinop | -0.7123\* | 0.0217ns | 0.2113 | - | - | - |
| Belém | -0.8465\* | 0.0463\* | 0.1931 | -0.088 | 3.22 | 0.6200 |
| Cametá | -1.10\* | 0.0599\* | 0.3912 | -0.093 | 3.03 | 0.7403 |
| Conceição do Araguaia | -0.8721\* | 0.0123ns | 0.1874 | - | - | - |
| Itaituba | -1.09\* | 0.0586\* | 0.3926 | -0.073 | 3.72 | 0.7701 |
| Marabá | -0.2147ns | 0.0189ns | 0.1796 | - | - | - |
| Monte Alegre | -1.04\* | 0.0585\* | 0.4004 | -0.123 | 3.41 | 0.7427 |
| Óbidos | -1.08\* | 0.0575\* | 0.4869 | -0.036 | 3.02 | 0.8392 |
| Soure | -1.79\* | 0.0846\* | 0.5256 | -0.057 | 2.93 | 0.8324 |
| Tucuruí | -0.8213\* | 0.0482\* | 0.2911 | -0.134 | 2.95 | 0.6937 |
| Boa Vista | -0.7483\* | 0.0461\* | 0.4513 | 0.113 | 3.26 | 0.7947 |

Table 36. Coefficients of the model 29 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.46\* | -1.41\* | 0.5005 | -0.002 | 3.25 | 0.8297 |
| Macapá | 2.75\* | -2.91\* | 0.5561 | 0.023 | 3.55 | 0.8466 |
| Barcelos | 1.66\* | -1.66\* | 0.5271 | 0.055 | 3.75 | 0.8250 |
| Eirunepé | 1.52\* | -1.53\* | 0.5878 | -0.006 | 2.66 | 0.8699 |
| Itacoatiara | 2.05\* | -2.10\* | 0.5239 | 0.003 | 3.55 | 0.8265 |
| Lábrea | 1.32\* | -1.21\* | 0.4489 | 0.128 | 3.00 | 0.7389 |
| Manaus | 1.99\* | -2.04\* | 0.3578 | 0.114 | 4.12 | 0.7393 |
| Parintins | 2.32\* | -2.35\* | 0.4555 | 0.298 | 4.10 | 0.7759 |
| S. G. da Cachoeira | 1.69\* | -1.71\* | 0.7502 | -0.010 | 2.60 | 0.9100 |
| Sinop | 1.13\* | -0.9419\* | 0.3199 | 0.109 | 3.56 | 0.7017 |
| Belém | 1.68\* | -1.74\* | 0.2854 | -0.042 | 3.10 | 0.6926 |
| Cametá | 1.12ns | -0.6521ns | 0.2126 | - | - | - |
| Conceição do Araguaia | 1.27\* | -1.15\* | 0.4657 | 0.079 | 3.30 | 0.7894 |
| Itaituba | 1.98\* | -1.99\* | 0.5347 | 0.021 | 3.32 | 0.8290 |
| Marabá | 1.48\* | -1.39\* | 0.4601 | -0.068 | 2.88 | 0.7869 |
| Monte Alegre | 2.04\* | -1.94\* | 0.3026 | -0.125 | 3.51 | 0.7010 |
| Óbidos | 1.62\* | -1.69\* | 0.5542 | 0.006 | 2.95 | 0.8538 |
| Soure | 0.9824\* | -2.51ns | 0.3012 | - | - | - |
| Tucuruí | 1.42\* | -1.28\* | 0.2119 | -0.210 | 3.05 | 0.6681 |
| Boa Vista | 1.86\* | -1.87\* | 0.5269 | 0.082 | 3.00 | 0.8364 |

Table 37. Coefficients of the model 30 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.1044\* | 0.0386\* | 0.5502 | -0.060 | 3.09 | 0.8576 |
| Macapá | -0.0642\* | 0.0788\* | 0.6276 | 0.047 | 3.23 | 0.8806 |
| Barcelos | 0.0806\* | 0.0427\* | 0.5582 | 0.048 | 3.56 | 0.8455 |
| Eirunepé | 0.0559\* | 0.0402\* | 0.6188 | -0.040 | 2.58 | 0.8816 |
| Itacoatiara | 0.0347\* | 0.0547\* | 0.576 | -0.002 | 3.36 | 0.8512 |
| Lábrea | 0.1636\* | 0.0313\* | 0.4862 | 0.136 | 2.93 | 0.7673 |
| Manaus | 0.0220\* | 0.0541\* | 0.4306 | 0.097 | 3.83 | 0.7902 |
| Parintins | 0.0291\* | 0.0653\* | 0.5397 | 0.275 | 3.81 | 0.8224 |
| S. G. da Cachoeira | 0.0404\* | 0.0464\* | 0.7761 | -0.057 | 2.43 | 0.9237 |
| Sinop | 0.2656\* | 0.0223\* | 0.2973 | 0.075 | 3.61 | 0.6968 |
| Belém | 0.0094ns | 0.0448\* | 0.3208 | - | - | - |
| Cametá | 0.1693\* | 0.0473\* | 0.256 | -0.213 | 3.26 | 0.6451 |
| Conceição do Araguaia | 0.1950\* | 0.0276\* | 0.4657 | 0.065 | 3.27 | 0.7994 |
| Itaituba | 0.0863\* | 0.0493\* | 0.5646 | 0.008 | 3.21 | 0.8448 |
| Marabá | 0.1583\* | 0.0357\* | 0.4896 | -0.061 | 2.80 | 0.8049 |
| Monte Alegre | 0.1423\* | 0.0552\* | 0.3915 | -0.132 | 3.32 | 0.7585 |
| Óbidos | 0.0712\* | 0.0374\* | 0.5512 | 0.008 | 2.92 | 0.8574 |
| Soure | 0.0521\* | 0.0114ns | 0.2125 | - | - | - |
| Tucuruí | 0.1787\* | 0.0356\* | 0.2735 | -0.200 | 2.95 | 0.7092 |
| Boa Vista | 0.0988\* | 0.0445\* | 0.5792 | 0.071 | 2.86 | 0.8604 |

Table 38. Coefficients of the model 31 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2688ns | -0.0493\* | 0.0277\* | 0.0006\* | 0.5633 | - | - | - |
| Macapá | -4.29\* | 0.0998ns | 0.1670\* | -0.0037\* | 0.7175 | - | - | - |
| Barcelos | -3.99\* | 0.1284\* | 0.1509\* | -0.0045\* | 0.6117 | 0.019 | 3.21 | 0.8805 |
| Eirunepé | 1.23\* | -0.0980\* | -0.0047ns | 0.0021\* | 0.6365 | - | - | - |
| Itacoatiara | -6.54\* | 0.2224\* | 0.2318\* | -0.0074\* | 0.6671 | -0.038 | 3.02 | 0.8914 |
| Lábrea | 2.33\* | -0.1404\* | -0.0462\* | 0.0038\* | 0.5589 | 0.170 | 2.70 | 0.8252 |
| Manaus | -4.17\* | 0.1219\* | 0.1573\* | -0.0043\* | 0.5153 | 0.020 | 3.43 | 0.8445 |
| Parintins | -6.63\* | 0.2153\* | 0.2331\* | -0.0071\* | 0.6875 | 0.231 | 3.10 | 0.8942 |
| S. G. da Cachoeira | 0.1897ns | -0.0568\* | 0.0337\* | 0.0006ns | 0.789 | - | - | - |
| Sinop | 3.32\* | -0.1764\* | -0.0734\* | 0.0048\* | 0.3564 | 0.023 | 3.40 | 0.7537 |
| Belém | -2.57\* | 0.0608ns | 0.1052\* | -0.0024ns | 0.3569 | - | - | - |
| Cametá | -5.88\* | 0.1817\* | 0.2021\* | -0.0057\* | 0.5513 | -0.098 | 2.53 | 0.8363 |
| Conceição do Araguaia | 3.06\* | -0.1666\* | -0.0603\* | 0.0042\* | 0.5191 | 0.064 | 3.11 | 0.8313 |
| Itaituba | -5.98\* | 0.2054\* | 0.2121\* | -0.0068\* | 0.6231 | -0.022 | 2.96 | 0.8770 |
| Marabá | 1.35\* | -0.1036\* | -0.0133ns | 0.0026\* | 0.5714 | - | - | - |
| Monte Alegre | -10.64\* | 0.4002\* | 0.3628\* | -0.0129\* | 0.5617 | -0.123 | 2.91 | 0.8389 |
| Óbidos | -2.22\* | 0.0625ns | 0.0930\* | -0.0024ns | 0.5663 | - | - | - |
| Soure | -14.91\* | 0.5400\* | 0.4841\* | -0.0168\* | 0.5487 | -0.133 | 2.92 | 0.8419 |
| Tucuruí | -5.21\* | 0.1932\* | 0.1885\* | -0.0064\* | 0.3644 | -0.153 | 2.78 | 0.7571 |
| Boa Vista | -3.01\* | 0.0891\* | 0.1227\* | -0.0033\* | 0.6122 | 0.073 | 2.77 | 0.8746 |

Table 39. Coefficients of the model 32 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -0.0947\* | -0.0320\* | 0.0403\* | 0.5619 | -0.092 | 3.06 | 0.8649 |
| Macapá | -1.47\* | -0.0194\* | 0.0783\* | 0.7164 | 0.094 | 2.77 | 0.9186 |
| Barcelos | -0.6610\* | -0.0181\* | 0.0484\* | 0.6062 | 0.022 | 3.25 | 0.8779 |
| Eirunepé | -0.1773\* | -0.0323\* | 0.0420\* | 0.6295 | -0.052 | 2.56 | 0.8844 |
| Itacoatiara | -0.8889\* | -0.0147\* | 0.0535\* | 0.6506 | -0.002 | 3.13 | 0.8815 |
| Lábrea | -0.3256\* | -0.0185\* | 0.0374\* | 0.529 | 0.152 | 2.83 | 0.8001 |
| Manaus | -0.7275\* | -0.0216\* | 0.0528\* | 0.5048 | 0.039 | 3.48 | 0.8388 |
| Parintins | -1.19\* | -0.0107\* | 0.0621\* | 0.6742 | 0.221 | 3.17 | 0.8903 |
| S. G. da Cachoeira | -0.2970\* | -0.0356\* | 0.0492\* | 0.7889 | -0.087 | 2.32 | 0.9321 |
| Sinop | 0.0584ns | -0.0168\* | 0.0252\* | 0.308 | - | - | - |
| Belém | -0.7150\* | -0.0188\* | 0.0482\* | 0.3563 | -0.074 | 2.92 | 0.7430 |
| Cametá | -1.43\* | -0.0067\* | 0.0664\* | 0.5457 | -0.112 | 2.56 | 0.8336 |
| Conceição do Araguaia | -0.2085\* | -0.0179\* | 0.0333\* | 0.4977 | 0.036 | 3.15 | 0.8265 |
| Itaituba | -0.5811\* | -0.0230\* | 0.0505\* | 0.6082 | -0.032 | 3.01 | 0.8710 |
| Marabá | -0.5941\* | -0.0158\* | 0.0452\* | 0.5681 | -0.034 | 2.60 | 0.8458 |
| Monte Alegre | -0.7748\* | -0.0177\* | 0.0557\* | 0.5118 | -0.126 | 3.08 | 0.8155 |
| Óbidos | -0.3470\* | -0.0202\* | 0.0382\* | 0.5645 | 0.013 | 2.86 | 0.8658 |
| Soure | -2.18\* | 0.0148\* | 0.0760\* | 0.5148 | -0.134 | 2.95 | 0.8335 |
| Tucuruí | -0.4923\* | -0.0096\* | 0.0377\* | 0.3497 | -0.176 | 2.83 | 0.7505 |
| Boa Vista | -0.3490\* | -0.0252\* | 0.0442\* | 0.6079 | 0.068 | 2.79 | 0.8726 |

Table 40. Coefficients of the model 33 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 1.95\* | -0.0348\* | 0.0376\* | 0.5621 | -0.019 | 3.05 | 0.8569 |
| Macapá | -11.82\* | -0.0637\* | 0.0757\* | 0.6342 | 0.075 | 3.24 | 0.8795 |
| Barcelos | -4.27\* | -0.0340\* | 0.0427\* | 0.5715 | 0.075 | 3.47 | 0.8517 |
| Eirunepé | 1.65\* | -0.0382\* | 0.0391\* | 0.625 | -0.006 | 2.56 | 0.8796 |
| Itacoatiara | -0.2027ns | -0.0491\* | 0.0518\* | 0.5834 | - | - | - |
| Lábrea | -0.7596ns | -0.0256\* | 0.0331\* | 0.5111 | - | - | - |
| Manaus | 0.0028ns | -0.0470\* | 0.0495\* | 0.4386 | - | - | - |
| Parintins | -7.98\* | -0.0474\* | 0.0595\* | 0.5608 | 0.301 | 3.66 | 0.8328 |
| S. G. da Cachoeira | -1.18ns | -0.0430\* | 0.0462\* | 0.7795 | - | - | - |
| Sinop | 5.17\* | -0.0155\* | 0.0218\* | 0.3293 | 0.112 | 3.54 | 0.6914 |
| Belém | 10.92\* | -0.0508\* | 0.0402\* | 0.3461 | -0.002 | 2.97 | 0.7054 |
| Cametá | -9.32\* | -0.0286\* | 0.0466\* | 0.3481 | -0.147 | 3.06 | 0.6944 |
| Conceição do Araguaia | 2.48\* | -0.0226\* | 0.0282\* | 0.4927 | 0.099 | 3.17 | 0.8069 |
| Itaituba | 0.3354ns | -0.0436\* | 0.0475\* | 0.5762 | - | - | - |
| Marabá | 1.21ns | -0.0300\* | 0.0356\* | 0.5211 | - | - | - |
| Monte Alegre | 1.28ns | -0.0431\* | 0.0494\* | 0.4315 | - | - | - |
| Óbidos | 5.62\* | -0.0397\* | 0.0365\* | 0.5645 | 0.050 | 2.88 | 0.8547 |
| Soure | -20.67\* | 0.0161\* | 0.0231\* | 0.2499 | -0.065 | 3.69 | 0.6223 |
| Tucuruí | 6.02\* | -0.0314\* | 0.0329\* | 0.3239 | -0.143 | 2.85 | 0.7026 |
| Boa Vista | 2.34\* | -0.0405\* | 0.0427\* | 0.5933 | 0.115 | 2.81 | 0.8588 |

Table 41. Coefficients of the model 34 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.4472ns | 0.0851\* | 0.7530\* | 0.57 | - | - | - |
| Macapá | -1.63ns | 0.0757\* | 1.00\* | 0.6245 | - | - | - |
| Barcelos | -4.04\* | 0.1434\* | 0.6390\* | 0.5815 | 0.057 | 3.45 | 0.8563 |
| Eirunepé | 0.6178ns | 0.0605\* | 0.8640\* | 0.6271 | - | - | - |
| Itacoatiara | 2.06\* | 0.0509\* | 1.00\* | 0.5824 | 0.051 | 3.34 | 0.8468 |
| Lábrea | -1.29ns | 0.1292\* | 0.6029\* | 0.5131 | - | - | - |
| Manaus | 2.53\* | 0.0438\* | 1.04\* | 0.4376 | 0.158 | 3.80 | 0.7787 |
| Parintins | 0.3420ns | 0.0825\* | 0.9044\* | 0.5449 | - | - | - |
| S. G. da Cachoeira | -0.1217ns | 0.0692\* | 0.8646\* | 0.7793 | - | - | - |
| Sinop | 2.51\* | 0.1263\* | 0.5296\* | 0.3586 | 0.106 | 3.44 | 0.7213 |
| Belém | 5.87\* | 0.0086\* | 1.52\* | 0.3403 | -0.009 | 2.97 | 0.7042 |
| Cametá | 3.64\* | 0.0878\* | 0.7848\* | 0.2765 | -0.181 | 3.21 | 0.6369 |
| Conceição do Araguaia | 0.6991ns | 0.1120\* | 0.6138\* | 0.5141 | - | - | - |
| Itaituba | 0.0446ns | 0.0946\* | 0.7855\* | 0.5794 | - | - | - |
| Marabá | 1.42ns | 0.0945\* | 0.7058\* | 0.5262 | - | - | - |
| Monte Alegre | 7.15\* | 0.0410\* | 1.07\* | 0.4249 | -0.076 | 3.22 | 0.7538 |
| Óbidos | 1.79ns | 0.0510\* | 0.8932\* | 0.5637 | - | - | - |
| Soure | 1.05\* | 0.1124ns | 0.2145ns | 0.2564 | - | - | - |
| Tucuruí | 9.55\* | 0.0113\* | 1.37\* | 0.3283 | -0.141 | 2.85 | 0.7034 |
| Boa Vista | 4.04\* | 0.0422\* | 1.01\* | 0.5924 | 0.111 | 2.81 | 0.8589 |

Table 42. Coefficients of the model 35 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -0.2054\* | 0.1586\* | 0.0024\* | 0.5959 | -0.091 | 2.93 | 0.8794 |
| Macapá | -0.2501\* | -0.2016\* | 0.0177\* | 0.7291 | 0.072 | 2.72 | 0.9223 |
| Barcelos | -0.1480\* | -0.0693\* | 0.0104\* | 0.6481 | 0.000 | 3.04 | 0.8956 |
| Eirunepé | -0.2553\* | 0.1472\* | 0.0030\* | 0.6512 | -0.068 | 2.51 | 0.8914 |
| Itacoatiara | -0.1826\* | -0.0277ns | 0.0094\* | 0.6371 | - | - | - |
| Lábrea | -0.0843\* | -0.0200ns | 0.0074\* | 0.5884 | - | - | - |
| Manaus | -0.1898\* | -0.0343\* | 0.0094\* | 0.5232 | 0.050 | 3.44 | 0.8444 |
| Parintins | -0.1182\* | -0.2181\* | 0.0164\* | 0.6815 | 0.186 | 3.08 | 0.8961 |
| S. G. da Cachoeira | -0.2515\* | 0.1637\* | 0.0027\* | 0.7869 | -0.052 | 2.36 | 0.9290 |
| Sinop | -0.0140ns | 0.1664\* | -0.0002ns | 0.3448 | - | - | - |
| Belém | -0.2182\* | -0.0032ns | 0.0078\* | 0.3832 | - | - | - |
| Cametá | -0.0942\* | -0.2688\* | 0.0179\* | 0.5636 | -0.154 | 2.56 | 0.8365 |
| Conceição do Araguaia | -0.1008\* | 0.0962\* | 0.0032\* | 0.5459 | 0.052 | 3.01 | 0.8458 |
| Itaituba | -0.1920\* | 0.0645\* | 0.0064\* | 0.6281 | -0.012 | 2.94 | 0.8788 |
| Marabá | -0.1423\* | 0.0240ns | 0.0069\* | 0.5875 | - | - | - |
| Monte Alegre | -0.0286ns | -0.1242\* | 0.0123\* | 0.5166 | - | - | - |
| Óbidos | -0.1648\* | 0.0646ns | 0.0048\* | 0.5945 | - | - | - |
| Soure | 0.3243\* | -0.9916\* | 0.0393\* | 0.5422 | -0.067 | 2.91 | 0.8348 |
| Tucuruí | 0.0655\* | -0.1478\* | 0.0108\* | 0.3919 | -0.168 | 2.72 | 0.7746 |
| Boa Vista | -0.1597\* | 0.0662\* | 0.0056\* | 0.6272 | 0.047 | 2.69 | 0.8835 |

Table 43. Coefficients of the model 36 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -2.77ns | 2.58ns | 0.1041ns | 0.5955 | - | - | - |
| Macapá | -0.7379\* | 0.5274\* | 0.4374\* | 0.6364 | 0.038 | 3.23 | 0.8821 |
| Barcelos | -8.77ns | 8.47ns | 0.0401ns | 0.6151 | - | - | - |
| Eirunepé | -1.08ns | 0.9167ns | 0.2289\* | 0.6432 | - | - | - |
| Itacoatiara | -1.95ns | 1.75ns | 0.1582ns | 0.5982 | - | - | - |
| Lábrea | -157.96ns | 157.73ns | 0.0019ns | 0.5461 | - | - | - |
| Manaus | -17.93ns | 17.59ns | 0.0215ns | 0.4616 | - | - | - |
| Parintins | -21.95ns | 21.65ns | 0.0187ns | 0.5749 | - | - | - |
| S. G. da Cachoeira | -0.1316\* | 0.1429\* | 0.6483\* | 0.7819 | -0.044 | 2.41 | 0.9253 |
| Sinop | -166.85ns | 166.74ns | 0.0015ns | 0.3937 | - | - | - |
| Belém | -0.8496ns | 0.6606ns | 0.2960\* | 0.3297 | - | - | - |
| Cametá | -136.00ns | 135.76ns | 0.0027ns | 0.3031 | - | - | - |
| Conceição do Araguaia | -129.28ns | 129.05ns | 0.0023ns | 0.5595 | - | - | - |
| Itaituba | -29.65ns | 29.35ns | 0.0128ns | 0.6124 | - | - | - |
| Marabá | -191.21ns | 190.94ns | 0.0018ns | 0.5756 | - | - | - |
| Monte Alegre | -148.38ns | 148.14ns | 0.0027ns | 0.4375 | - | - | - |
| Óbidos | -91.79ns | 91.42ns | 0.0038ns | 0.5956 | - | - | - |
| Soure | -15.65ns | 33.56ns | 0.0236ns | 0.2314 | - | - | - |
| Tucuruí | -19.81ns | 19.71ns | 0.0137ns | 0.2877 | - | - | - |
| Boa Vista | -14.27ns | 13.92ns | 0.0271ns | 0.6031 | - | - | - |

Table 44. Coefficients of the model 37 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 1.13\* | -0.8915\* | -1.20\* | 0.2765 | 0.095 | 4.06 | 0.6467 |
| Macapá | 1.16\* | -3797.29ns | -3.72\* | 0.6243 | - | - | - |
| Barcelos | 0.0046\* | 4.63E-08\* | 3.83\* | 0.4000 | 0.081 | 4.02 | 0.7660 |
| Eirunepé | 1.13\* | -2.24\* | -1.46\* | 0.2849 | 0.133 | 3.81 | 0.5879 |
| Itacoatiara | 0.7600\* | -2542546ns | -5.91\* | 0.5312 | - | - | - |
| Lábrea | 1.04\* | -6.99\* | -1.85\* | 0.3081 | 0.034 | 3.16 | 0.6488 |
| Manaus | 0.9315\* | -750.68ns | -3.30\* | 0.4567 | - | - | - |
| Parintins | 0.8185\* | -133852187ns | -7.11\* | 0.6769 | - | - | - |
| S. G. da Cachoeira | 0.0445ns | 1.20E-05ns | 2.05\* | 0.1654 | - | - | - |
| Sinop | 1.08\* | -3.51\* | -1.68\* | 0.2839 | 0.048 | 3.67 | 0.6535 |
| Belém | 1.01\* | -14.67\* | -2.05\* | 0.2801 | -0.044 | 3.08 | 0.6521 |
| Cametá | 0.7327\* | -24592601318ns | -8.83\* | 0.4866 | - | - | - |
| Conceição do Araguaia | 1.23\* | -3.06\* | -1.53\* | 0.306 | 0.073 | 3.56 | 0.7219 |
| Itaituba | 0.7663\* | -46059339ns | -6.84\* | 0.5141 | - | - | - |
| Marabá | 1.24\* | -9.63\* | -1.87\* | 0.3649 | -0.006 | 3.19 | 0.6892 |
| Monte Alegre | 0.7661\* | -3751328432ns | -8.24\* | 0.5332 | - | - | - |
| Óbidos | 0.6661\* | -2705169991ns | -8.20\* | 0.6063 | - | - | - |
| Soure | 0.8622\* | -24887467ns | -6.56\* | 0.5691 | - | - | - |
| Tucuruí | 0.7957\* | -1455.11ns | -3.65\* | 0.3233 | - | - | - |
| Boa Vista | 0.3058\* | 1.64E-09\* | 4.55\* | 0.3773 | 0.124 | 3.48 | 0.7463 |

Table 45. Coefficients of the model 38 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.39E-09\* | 1.36ns | 0.1478 | - | - | - |
| Macapá | 3.39E-09\* | 4.61\* | 0.5057 | 0.030 | 3.65 | 0.8404 |
| Barcelos | 5.18E-08\* | 3.80\* | 0.4000 | 0.079 | 4.02 | 0.7665 |
| Eirunepé | 3.44E-08ns | 2.32ns | 0.3111 | - | - | - |
| Itacoatiara | 7.64E-08\* | 3.62\* | 0.3473 | -0.133 | 4.26 | 0.7373 |
| Lábrea | 3.28E-07\* | 1.21ns | 0.2123 | - | - | - |
| Manaus | 7.08E-07\* | 2.93\* | 0.2299 | -0.120 | 4.34 | 0.7091 |
| Parintins | 5.13E-08\* | 3.77\* | 0.4545 | 0.018 | 3.93 | 0.8126 |
| S. G. da Cachoeira | 1.23E-06\* | 4.51ns | 0.2451 | - | - | - |
| Sinop | 2.89E-09\* | 3.56ns | 0.1897 | - | - | - |
| Belém | 4.89E-08ns | 2.69ns | 0.3217 | - | - | - |
| Cametá | 1.46E-06\* | 2.78\* | 0.2089 | -0.214 | 3.45 | 0.6884 |
| Conceição do Araguaia | 5.38E-09ns | 3.21ns | 0.3214 | - | - | - |
| Itaituba | 1.33E-06\* | 2.79\* | 0.1847 | -0.242 | 4.36 | 0.6922 |
| Marabá | 4.28E-05\* | 2.05ns | 0.2368 | - | - | - |
| Monte Alegre | 3.96E-06\* | 2.49\* | 0.2154 | -0.235 | 3.84 | 0.6779 |
| Óbidos | 1.58E-06\* | 2.72\* | 0.3075 | -0.171 | 3.57 | 0.7729 |
| Soure | 1.09E-08\* | 4.25\* | 0.4300 | -0.119 | 3.22 | 0.7997 |
| Tucuruí | 2.89E-09ns | 2.08ns | 0.2314 | - | - | - |
| Boa Vista | 2.77E-05\* | 1.88\* | 0.3318 | 0.038 | 3.60 | 0.7556 |

Table 46. Coefficients of the model 39 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0665ns | 0.0698ns | 1.02ns | 0.1684 | - | - | - |
| Macapá | 0.2314ns | 0.0214\* | 0.9147ns | 0.2417 | - | - | - |
| Barcelos | 1.22E-17\* | 27.39\* | 0.1015\* | 0.4435 | 0.151 | 3.89 | 0.7743 |
| Eirunepé | 0.0002ns | 2.81ns | 0.3006ns | 0.1615 | - | - | - |
| Itacoatiara | 1.21E-15\* | 23.29\* | 0.1101\* | 0.4273 | 0.000 | 3.99 | 0.7550 |
| Lábrea | 0.1159ns | 0.0019ns | 2 | 0.2404 | - | - | - |
| Manaus | 1.48E-13\* | 20.33\* | 0.1040\* | 0.3428 | 0.033 | 4.01 | 0.7332 |
| Parintins | 0.0025\* | 2.65ns | 1.78ns | 0.2568 | - | - | - |
| S. G. da Cachoeira | 9.02E-09\* | 12.31\* | 0.1101\* | 0.1725 | 0.249 | 4.33 | 0.5218 |
| Sinop | 2.33E-05ns | 4.21ns | 0.6587ns | 0.2479 | - | - | - |
| Belém | 4.61E-08\* | 8.83\* | 0.1799\* | 0.1803 | -0.082 | 3.25 | 0.5988 |
| Cametá | 1.23E-11\* | 16.82\* | 0.1134\* | 0.3652 | -0.090 | 3.08 | 0.7154 |
| Conceição do Araguaia | 7.11E-07ns | 7.89\*\* | 0.7894ns | 0.2478 | - | - | - |
| Itaituba | 4.59E-14\* | 22.01\* | 0.0937\* | 0.3588 | -0.044 | 3.84 | 0.7342 |
| Marabá | 6.11E-11ns | 15.78ns | 0.3218ns | 0.2178 | - | - | - |
| Monte Alegre | 2.36E-13\* | 21.11\* | 0.0904\* | 0.3681 | -0.105 | 3.48 | 0.7113 |
| Óbidos | 7.90E-18\* | 30.15\* | 0.0749\* | 0.4400 | -0.011 | 3.17 | 0.8031 |
| Soure | 2.20E-13\* | 17.49\* | 0.1472\* | 0.4971 | -0.044 | 3.01 | 0.8142 |
| Tucuruí | 8.16E-07ns | 6.80ns | 0.2030ns | 0.2836 | - | - | - |
| Boa Vista | 1.26E-09\* | 13.53\* | 0.1152\* | 0.4384 | 0.131 | 3.30 | 0.7806 |

Table 47. Coefficients of the model 40 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.8537\* | -0.0680\* | 0.0021\* | 0.1744 | -0.068 | 4.40 | 0.6326 |
| Macapá | -9.01\* | 0.6116\* | -0.0095\* | 0.6089 | 0.077 | 3.23 | 0.8781 |
| Barcelos | -13.35\* | 0.9682\* | -0.0167\* | 0.5647 | 0.044 | 3.45 | 0.8556 |
| Eirunepé | 0.1057ns | -0.0126ns | 0.0009ns | 0.1621 | - | - | - |
| Itacoatiara | -10.40\* | 0.7297\* | -0.0121\* | 0.5212 | -0.099 | 3.62 | 0.8255 |
| Lábrea | 2.31\* | -0.1905\* | 0.0045\* | 0.2506 | -0.067 | 3.20 | 0.7378 |
| Manaus | -7.76\* | 0.5374\* | -0.0086\* | 0.4245 | -0.019 | 3.71 | 0.7986 |
| Parintins | -13.52\* | 0.9450\* | -0.0157\* | 0.6712 | 0.143 | 3.20 | 0.8850 |
| S. G. da Cachoeira | -11.37\* | 0.8539\* | -0.0153\* | 0.2968 | 0.162 | 4.00 | 0.6877 |
| Sinop | -7.89\*\* | 0.6897ns | -0.0368ns | 0.3148 | - | - | - |
| Belém | -10.63\* | 0.7691\* | -0.0133\* | 0.2383 | -0.072 | 3.16 | 0.6513 |
| Cametá | -13.27\* | 0.9454\* | -0.0160\* | 0.4844 | -0.049 | 2.76 | 0.7967 |
| Conceição do Araguaia | -9.87ns | -0.8921ns | -0.0127ns | 0.3214 | - | - | - |
| Itaituba | -11.64\* | 0.8240\* | -0.0138\* | 0.4971 | -0.075 | 3.34 | 0.8320 |
| Marabá | -11.68\* | 0.8668\* | -0.0153\* | 0.1992 | -0.099 | 3.59 | 0.6373 |
| Monte Alegre | -14.43\* | 1.03\* | -0.0177\* | 0.5492 | -0.092 | 2.92 | 0.8250 |
| Óbidos | -9.71\* | 0.6947\* | -0.0117\* | 0.6016 | 0.032 | 2.62 | 0.8904 |
| Soure | -14.79\* | 1.03\* | -0.0174\* | 0.5663 | -0.040 | 2.85 | 0.8444 |
| Tucuruí | -4.52\* | 0.3267\* | -0.0052\* | 0.3009 | -0.124 | 2.91 | 0.7048 |
| Boa Vista | -7.36\* | 0.5247\* | -0.0086\* | 0.4954 | 0.105 | 3.12 | 0.8242 |

Table 48. Coefficients of the model 41 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 4.35\* | -3.35\* | 0.7203\* | -1.92\* | 0.6089 | -0.088 | 2.90 | 0.8842 |
| Macapá | 10.56\* | -7.09\* | 1.30\* | -2.00\* | 0.6484 | 0.139 | 3.29 | 0.8716 |
| Barcelos | -0.1320\* | 0.0807\* | -0.0026\* | 0.1087ns | 0.6462 | - | - | - |
| Eirunepé | -0.0305ns | 0.0417ns | -0.0014\* | 0.2972ns | 0.6508 | - | - | - |
| Itacoatiara | 7.29\* | -5.24\* | 1.07\* | -2.03\* | 0.6100 | 0.039 | 3.26 | 0.8644 |
| Lábrea | -0.0093ns | 0.0359ns | -0.0014ns | 0.3881ns | 0.5802 | - | - | - |
| Manaus | 10.86\* | -7.40\* | 1.36\* | -2.12\* | 0.4750 | 0.071 | 3.71 | 0.8127 |
| Parintins | 4.49\* | -4.12\* | 0.9958\* | -1.99\* | 0.5850 | 0.316 | 3.54 | 0.8478 |
| S. G. da Cachoeira | 0.0508\* | 0.0058ns | -0.0003ns | 0.8085ns | 0.7846 | - | - | - |
| Sinop | -0.0240ns | 0.0582\* | -0.0018\* | 0.1363ns | 0.4656 | - | - | - |
| Belém | 11.06\* | -6.52\* | 1.06\* | -2.05\* | 0.3376 | -0.038 | 3.00 | 0.7188 |
| Cametá | -0.9629\* | 0.3950\* | -0.0146\* | -0.3895\* | 0.3294 | -0.179 | 3.13 | 0.6974 |
| Conceição do Araguaia | -0.1167\* | 0.0849\* | -0.0022\* | -0.0080ns | 0.5853 | - | - | - |
| Itaituba | 9.76\* | -6.96\* | 1.33\* | -2.10\* | 0.6316 | -0.031 | 2.89 | 0.8834 |
| Marabá | -0.1394\* | 0.0886\* | -0.0030\* | 0.0901ns | 0.6056 | - | - | - |
| Monte Alegre | 58.68\* | -35.04\* | 5.67\* | -2.62\* | 0.4706 | -0.047 | 3.14 | 0.7887 |
| Óbidos | 22.67\* | -12.90\* | 1.90\* | -2.25\* | 0.6200 | -0.005 | 2.75 | 0.8816 |
| Soure | 2.39ns | -7.89\* | 2.78ns | -4.69ns | 0.3218 | - | - | - |
| Tucuruí | -0.7686ns | 0.3790ns | -0.0018ns | -0.7287ns | 0.2888 | - | - | - |
| Boa Vista | 6.19\* | -4.48\* | 0.8822\* | -1.95\* | 0.6096 | 0.045 | 2.77 | 0.8760 |

Table 49. Coefficients of the model 42 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | -0.0520ns | 0.0573\* | 0.0016ns | -1.66E-04\* | 0.6213 | - | - | - |
| Macapá | 0.3902\* | -0.2043\* | 0.0505\* | -0.0027\* | 0.663 | 0.070 | 3.11 | 0.8906 |
| Barcelos | -0.2008\* | 0.1052\* | -0.0032\* | -2.81E-06ns | 0.6454 | - | - | - |
| Eirunepé | -0.0783ns | 0.0634\* | 3.82E-05ns | -8.82E-05ns | 0.6503 | - | - | - |
| Itacoatiara | 0.0649ns | -0.0044ns | 0.0142\* | -8.67E-04\* | 0.6181 | - | - | - |
| Lábrea | -0.0729ns | 0.0659\* | 3.96E-04ns | -1.25E-04ns | 0.5797 | - | - | - |
| Manaus | -0.1452\* | 0.0750\* | 0.0031ns | -3.62E-04\* | 0.4852 | - | - | - |
| Parintins | -0.0216ns | 0.0176ns | 0.0170\* | -0.0012\* | 0.6012 | - | - | - |
| S. G. da Cachoeira | 0.0194ns | 0.0413\* | 0.0024\* | -1.66E-04\* | 0.7846 | - | - | - |
| Sinop | -0.0973\* | 0.0866\* | -0.0025\* | -4.15E-07ns | 0.4646 | - | - | - |
| Belém | 0.2403\* | -0.0934\* | 0.0221\* | -0.0011\* | 0.3478 | -0.056 | 2.97 | 0.7298 |
| Cametá | -0.7003\* | 0.3111\* | -0.0238\* | 5.86E-04\* | 0.3378 | -0.177 | 3.12 | 0.7001 |
| Conceição do Araguaia | -0.1494\* | 0.0946\* | -0.0033\* | 2.92E-05ns | 0.5858 | - | - | - |
| Itaituba | -0.0524ns | 0.0455\* | 0.0069\* | -4.97E-04\* | 0.6429 | - | - | - |
| Marabá | -0.2020\* | 0.1112\* | -0.0037\* | 2.46E-06ns | 0.6053 | - | - | - |
| Monte Alegre | -0.0393ns | 0.0371ns | 0.0149\* | -0.0012\* | 0.482 | - | - | - |
| Óbidos | -0.1465ns | 0.0582\* | 0.0026ns | -2.33E-04\* | 0.6204 | - | - | - |
| Soure | -0.0014ns | 0.0231ns | 0.0008ns | -4.28E-03\* | 0.3217 | - | - | - |
| Tucuruí | -0.2351\* | 0.1734\* | -0.0142\* | 4.58E-04\* | 0.2893 | -0.220 | 2.90 | 0.7284 |
| Boa Vista | 0.0383ns | 0.0150ns | 0.0081\* | -4.45E-04\* | 0.6191 | - | - | - |

Table 50. Coefficients of the model 43 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0728ns | -0.0434ns | 0.0310\* | -0.0013\* | 0.6228 | - | - | - |
| Macapá | 1.55\* | -1.30\* | 0.1923\* | -0.0090\* | 0.6626 | 0.082 | 3.11 | 0.8891 |
| Barcelos | -0.3057\* | 0.2013\* | 0.0123\* | -0.0006\* | 0.6438 | -0.018 | 3.18 | 0.8897 |
| Eirunepé | -0.0549ns | 0.0441ns | 0.0207\* | -0.0008\* | 0.6505 | - | - | - |
| Itacoatiara | 0.4887\* | -0.3960\* | 0.0800\* | -0.0038\* | 0.6191 | 0.059 | 3.22 | 0.8701 |
| Lábrea | 0.0109ns | 0.0073ns | 0.0256\* | -0.0011\* | 0.5801 | - | - | - |
| Manaus | 0.1096ns | -0.1361ns | 0.0537\* | -0.0026\* | 0.4868 | - | - | - |
| Parintins | 0.3977\* | -0.3953\* | 0.1005\* | -0.0054\* | 0.6019 | 0.222 | 3.94 | 0.8208 |
| S. G. da Cachoeira | 0.0099ns | 0.0321ns | 0.0204\* | -0.0008\* | 0.7845 | - | - | - |
| Sinop | -0.1072ns | 0.1252\* | 0.0122\* | -0.0005\* | 0.4627 | - | - | - |
| Belém | 0.9611\* | -0.7301\* | 0.0967\* | -0.0039\* | 0.3477 | -0.055 | 2.97 | 0.7293 |
| Cametá | -1.66\* | 1.11\* | -0.0473\* | 0.0008\* | 0.3325 | -0.178 | 3.13 | 0.6975 |
| Conceição do Araguaia | -0.3142\* | 0.2334\* | 0.0052\* | -0.0003\* | 0.5838 | 0.039 | 2.89 | 0.8589 |
| Itaituba | 0.2635\* | -0.2302\* | 0.0617\* | -0.0028\* | 0.6448 | -0.039 | 2.81 | 0.8903 |
| Marabá | -0.3294\* | 0.2207\* | 0.0124\* | -0.0007\* | 0.6044 | -0.036 | 2.49 | 0.8590 |
| Monte Alegre | 0.6644\* | -0.5720\* | 0.1194\* | -0.0063\* | 0.4838 | -0.100 | 3.10 | 0.8025 |
| Óbidos | 0.1074ns | -0.1327ns | 0.0418\* | -0.0017\* | 0.6216 | - | - | - |
| Soure | 0.0178ns | -0.3217ns | 0.0328\* | -0.0038ns | 0.3218 | - | - | - |
| Tucuruí | -0.7784\* | 0.6222\* | -0.0291ns | 0.0008ns | 0.2890 | - | - | - |
| Boa Vista | 0.3942\* | -0.2844\* | 0.0560\* | -0.0022\* | 0.6195 | 0.070 | 2.75 | 0.8789 |

Table 51. Coefficients of the model 44 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 8.40\* | -0.4610\* | -14.89\* | 7.34\* | 0.6252 | -0.093 | 2.86 | 0.8890 |
| Macapá | 27.54\* | -1.62\* | -48.83\* | 24.10\* | 0.659 | 0.112 | 3.16 | 0.8834 |
| Barcelos | 8.22\* | -0.4523\* | -14.67\* | 7.24\* | 0.6525 | -0.013 | 3.14 | 0.8929 |
| Eirunepé | 5.88\* | -0.3164\* | -10.47\* | 5.17\* | 0.652 | -0.059 | 2.49 | 0.8937 |
| Itacoatiara | 14.83\* | -0.8959\* | -26.55\* | 13.25\* | 0.6192 | 0.059 | 3.22 | 0.8695 |
| Lábrea | 13.36\* | -0.6286\* | -22.36\* | 10.49\* | 0.5828 | 0.181 | 2.64 | 0.8257 |
| Manaus | 17.22\* | -1.00\* | -30.54\* | 15.07\* | 0.4915 | 0.094 | 3.69 | 0.8160 |
| Parintins | 16.09\* | -1.11\* | -29.97\* | 15.50\* | 0.6009 | 0.284 | 3.54 | 0.8497 |
| S. G. da Cachoeira | 1.48\* | -0.0829\* | -2.92\* | 1.59\* | 0.7831 | -0.042 | 2.41 | 0.9257 |
| Sinop | 9.05\* | -0.4192\* | -15.18\* | 7.16\* | 0.4816 | -0.022 | 3.08 | 0.8253 |
| Belém | 18.34\* | -0.9442\* | -31.42\* | 15.00\* | 0.3453 | -0.050 | 2.97 | 0.7262 |
| Cametá | 1.62ns | -0.3651\* | -5.59ns | 3.98\* | 0.3315 | - | - | - |
| Conceição do Araguaia | 4.53\* | -0.2511\* | -8.23\* | 4.14\* | 0.5885 | 0.025 | 2.88 | 0.8616 |
| Itaituba | 14.93\* | -0.8699\* | -26.59\* | 13.17\* | 0.6484 | -0.041 | 2.79 | 0.8928 |
| Marabá | 8.08\* | -0.4512\* | -14.42\* | 7.15\* | 0.6059 | -0.038 | 2.48 | 0.8620 |
| Monte Alegre | 32.97\* | -1.99\* | -58.35\* | 28.90\* | 0.4879 | -0.084 | 3.07 | 0.8041 |
| Óbidos | 15.01\* | -0.7476\* | -25.69\* | 12.21\* | 0.6269 | 0.026 | 2.72 | 0.8848 |
| Soure | 7.56\*\* | -2.69ns | -32.48ns | 8.98\* | 0.3211 | - | - | - |
| Tucuruí | -3.41ns | 0.0662ns | 4.61ns | -1.55ns | 0.2888 | - | - | - |
| Boa Vista | 13.16\* | -0.6799\* | -22.75\* | 10.96\* | 0.6187 | 0.058 | 2.75 | 0.8794 |

Table 52. Coefficients of the model 45 Group II adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | 7.10\* | -0.4130\* | -13.02\* | 6.47\* | 0.3146\* | 0.6513 | -0.040 | 2.78 | 0.8926 |
| Macapá | 18.05\* | -1.06\* | -32.94\* | 16.11\* | 1.08\* | 0.7264 | 0.153 | 2.69 | 0.9166 |
| Barcelos | 6.68\* | -0.3971\* | -13.03\* | 6.39\* | 1.04\* | 0.7197 | 0.017 | 2.75 | 0.9185 |
| Eirunepé | 4.56\* | -0.2595\* | -8.59\* | 4.26\* | 0.4144\* | 0.6825 | -0.017 | 2.42 | 0.8969 |
| Itacoatiara | 12.48\* | -0.7875\* | -23.28\* | 11.62\* | 0.7932\* | 0.7007 | 0.101 | 2.87 | 0.8989 |
| Lábrea | 10.72\* | -0.5403\* | -18.54\* | 8.83\* | 0.3082\* | 0.6095 | 0.212 | 2.55 | 0.8278 |
| Manaus | 14.57\* | -0.8666\* | -26.66\* | 13.08\* | 0.8747\* | 0.6124 | 0.134 | 3.17 | 0.8672 |
| Parintins | 13.14\* | -0.9469\* | -25.69\* | 13.19\* | 1.17\* | 0.7341 | 0.304 | 2.96 | 0.8983 |
| S. G. da Cachoeira | 1.52\* | -0.0997\* | -3.45\* | 1.84\* | 0.4104\* | 0.8000 | -0.059 | 2.28 | 0.9342 |
| Sinop | 7.33\* | -0.3692\* | -12.76\* | 6.12\* | 0.2696\* | 0.4998 | 0.011 | 3.02 | 0.8220 |
| Belém | 13.04\* | -0.6702\* | -22.98\* | 10.87\* | 0.8086\* | 0.4661 | -0.018 | 2.67 | 0.7835 |
| Cametá | 2.79ns | -0.3656\* | -7.70ns | 4.57\* | 0.9133\* | 0.5068 | - | - | - |
| Conceição do Araguaia | 2.93\* | -0.2000\* | -6.02\* | 3.16\* | 0.3889\* | 0.629 | 0.086 | 2.70 | 0.8751 |
| Itaituba | 13.70\* | -0.8282\* | -25.04\* | 12.42\* | 0.5538\* | 0.6981 | 0.002 | 2.54 | 0.9103 |
| Marabá | 5.06\* | -0.3339\* | -9.95\* | 5.10\* | 0.4996\* | 0.6639 | 0.017 | 2.32 | 0.8740 |
| Monte Alegre | 27.61\* | -1.71\* | -50.07\* | 24.76\* | 1.09\* | 0.6741 | -0.030 | 2.49 | 0.8771 |
| Óbidos | 13.64\* | -0.6925\* | -23.86\* | 11.31\* | 0.5745\* | 0.6767 | 0.074 | 2.50 | 0.9004 |
| Soure | -33.41\* | 1.81\* | 55.84\* | -26.79\* | 1.72\* | 0.3738 | -0.001 | 3.35 | 0.7044 |
| Tucuruí | -1.10ns | -0.0433ns | 0.2451ns | 0.3368ns | 0.7507\* | 0.4570 | - | - | - |
| Boa Vista | 11.07\* | -0.5971\* | -20.36\* | 9.72\* | 1.17\* | 0.7435 | 0.070 | 2.28 | 0.9206 |

**GROUP III**

Table 53. Coefficients of the model 46 Group III adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 30.21\* | -0.1654\* | 0.1864 | 0.177 | 4.27 | 0.5409 |
| Macapá | 70.90\* | -0.6663\* | 0.6484 | 0.070 | 3.00 | 0.8962 |
| Barcelos | 64.68\* | -0.5657\* | 0.4463 | 0.150 | 3.83 | 0.7900 |
| Eirunepé | 30.89\*\* | -1.23ns | 0.1978 | - | - | - |
| Itacoatiara | 59.17\* | -0.5408\* | 0.4838 | 0.011 | 3.79 | 0.7889 |
| Lábrea | 49.02\* | -0.4041\* | 0.3796 | -0.022 | 2.94 | 0.7469 |
| Manaus | 41.28\* | -0.3284\* | 0.3615 | 0.093 | 4.02 | 0.7213 |
| Parintins | 66.95\* | -0.6090\* | 0.5617 | 0.122 | 3.42 | 0.8556 |
| S. G. da Cachoeira | 55.89\* | -0.0897ns | 0.3218 | - | - | - |
| Sinop | 12.78ns | -0.0789ns | 0.4218 | - | - | - |
| Belém | 44.52\* | -0.3751\* | 0.3671 | -0.036 | 2.88 | 0.7281 |
| Cametá | 47.62\* | -0.3697\* | 0.3599 | -0.090 | 3.05 | 0.7048 |
| Conceição do Araguaia | 32.15\* | -0.1909\* | 0.273 | 0.130 | 3.69 | 0.6613 |
| Itaituba | 44.94\* | -0.3495\* | 0.2896 | 0.026 | 4.07 | 0.6497 |
| Marabá | 40.38\* | -0.2894\* | 0.3332 | -0.042 | 3.23 | 0.6746 |
| Monte Alegre | 50.69\* | -0.4089\* | 0.4587 | -0.014 | 3.24 | 0.7621 |
| Óbidos | 47.22\* | -0.3911\* | 0.5621 | -0.035 | 2.79 | 0.8620 |
| Soure | 59.35\* | -0.5134\* | 0.5144 | -0.007 | 2.91 | 0.8288 |
| Tucuruí | 36.29\* | -0.2470\* | 0.2958 | -0.102 | 2.93 | 0.6726 |
| Boa Vista | 37.25\* | -0.2604\* | 0.3728 | 0.152 | 3.48 | 0.7240 |

Table 54. Coefficients of the model 47 Group III adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 25.31\* | -0.1913\* | 0.2197 | 0.174 | 4.19 | 0.5803 |
| Macapá | 45.03\* | -0.6217\* | 0.602 | 0.067 | 3.22 | 0.8759 |
| Barcelos | 42.92\* | -0.5365\* | 0.434 | 0.155 | 3.88 | 0.7813 |
| Eirunepé | 33.28\* | -0.0789ns | 0.2178 | - | - | - |
| Itacoatiara | 37.25\* | -0.4853\* | 0.4418 | 0.013 | 3.94 | 0.7601 |
| Lábrea | 36.12\* | -0.4402\* | 0.4414 | -0.014 | 2.73 | 0.8010 |
| Manaus | 28.78\* | -0.3105\* | 0.3387 | 0.095 | 4.09 | 0.7047 |
| Parintins | 41.55\* | -0.5304\* | 0.498 | 0.132 | 3.63 | 0.8283 |
| S. G. da Cachoeira | 12.89ns | -0.1158ns | 0.2178 | - | - | - |
| Sinop | 10.78ns | -0.0897ns | 0.3389 | - | - | - |
| Belém | 29.88\* | -0.3486\* | 0.3226 | -0.036 | 2.97 | 0.6965 |
| Cametá | 33.52\* | -0.3482\* | 0.3481 | -0.092 | 3.07 | 0.6939 |
| Conceição do Araguaia | 25.78\* | -0.2043\* | 0.2737 | 0.129 | 3.70 | 0.6566 |
| Itaituba | 31.18\* | -0.3197\* | 0.2653 | 0.028 | 4.18 | 0.6146 |
| Marabá | 29.51\* | -0.2769\* | 0.2893 | -0.043 | 3.33 | 0.6343 |
| Monte Alegre | 34.44\* | -0.3697\* | 0.4206 | -0.018 | 3.32 | 0.7358 |
| Óbidos | 31.12\* | -0.3449\* | 0.5192 | -0.031 | 2.95 | 0.8402 |
| Soure | 39.76\* | -0.4861\* | 0.4886 | -0.008 | 3.01 | 0.8112 |
| Tucuruí | 27.48\* | -0.2494\* | 0.3031 | -0.101 | 2.91 | 0.6799 |
| Boa Vista | 26.88\* | -0.2297\* | 0.3611 | 0.161 | 3.52 | 0.7144 |

Table 55. Coefficients of the model 48 Group III adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.00\* | -0.0066\* | 0.2519 | 0.122 | 4.11 | 0.6461 |
| Macapá | 1.93\* | -0.0181\* | 0.6183 | 0.033 | 3.14 | 0.8872 |
| Barcelos | 1.77\* | -0.0154\* | 0.4398 | 0.132 | 3.85 | 0.7904 |
| Eirunepé | 1.08\* | -0.8974ns | 0.2178 | - | - | - |
| Itacoatiara | 1.61\* | -0.0146\* | 0.4557 | -0.039 | 3.90 | 0.7803 |
| Lábrea | 1.53\* | -0.0134\* | 0.4599 | -0.030 | 2.69 | 0.8198 |
| Manaus | 1.14\* | -0.0091\* | 0.3212 | 0.038 | 4.13 | 0.7144 |
| Parintins | 1.78\* | -0.0160\* | 0.51 | 0.069 | 3.60 | 0.8430 |
| S. G. da Cachoeira | 0.8210ns | -0.8792ns | 0.1978 | - | - | - |
| Sinop | 2.89\* | -1.07ns | 0.2178 | - | - | - |
| Belém | 1.25\* | -0.0106\* | 0.3108 | -0.073 | 2.98 | 0.7144 |
| Cametá | 1.31\* | -0.0101\* | 0.3203 | -0.130 | 3.15 | 0.7023 |
| Conceição do Araguaia | 1.00\* | -0.0068\* | 0.2067 | 0.020 | 3.89 | 0.6682 |
| Itaituba | 1.24\* | -0.0097\* | 0.233 | -0.044 | 4.27 | 0.6338 |
| Marabá | 1.22\* | -0.0093\* | 0.2255 | -0.128 | 3.51 | 0.6520 |
| Monte Alegre | 1.36\* | -0.0107\* | 0.3888 | -0.069 | 3.42 | 0.7399 |
| Óbidos | 1.23\* | -0.0099\* | 0.4963 | -0.094 | 3.01 | 0.8439 |
| Soure | 1.64\* | -0.0141\* | 0.4892 | -0.034 | 3.01 | 0.8209 |
| Tucuruí | 1.03\* | -0.0072\* | 0.2739 | -0.132 | 2.96 | 0.6878 |
| Boa Vista | 0.9219\* | -0.0056\* | 0.3264 | 0.132 | 3.62 | 0.7069 |

Table 56. Coefficients of the model 49 Group III adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.28\* | -0.0919\* | 0.1826 | 0.116 | 4.30 | 0.5731 |
| Macapá | 3.33\* | -0.3181\* | 0.6117 | 0.034 | 3.17 | 0.8844 |
| Barcelos | 2.96\* | -0.2719\* | 0.4222 | 0.137 | 3.91 | 0.7779 |
| Eirunepé | 1.12\* | -0.0789ns | 0.2378 | - | - | - |
| Itacoatiara | 2.72\* | -0.2554\* | 0.4446 | -0.037 | 3.94 | 0.7731 |
| Lábrea | 2.54\* | -0.2324\* | 0.4457 | -0.028 | 2.73 | 0.8122 |
| Manaus | 1.77\* | -0.1521\* | 0.3071 | 0.037 | 4.18 | 0.7025 |
| Parintins | 2.97\* | -0.2767\* | 0.4920 | 0.071 | 3.66 | 0.8339 |
| S. G. da Cachoeira | 1.36ns | -1.25ns | 0.5687 | - | - | - |
| Sinop | 0.9214ns | -0.8478ns | 0.2369 | - | - | - |
| Belém | 2.07\* | -0.1872\* | 0.3072 | -0.073 | 2.99 | 0.7118 |
| Cametá | 2.04\* | -0.1725\* | 0.3105 | -0.133 | 3.17 | 0.6949 |
| Conceição do Araguaia | 1.40\* | -0.1050\* | 0.1705 | 0.017 | 3.99 | 0.6363 |
| Itaituba | 1.93\* | -0.1642\* | 0.223 | -0.044 | 4.30 | 0.6238 |
| Marabá | 1.89\* | -0.1590\* | 0.2124 | -0.131 | 3.53 | 0.6426 |
| Monte Alegre | 2.11\* | -0.1803\* | 0.3738 | -0.069 | 3.46 | 0.7300 |
| Óbidos | 1.95\* | -0.1697\* | 0.4790 | -0.097 | 3.06 | 0.8351 |
| Soure | 2.72\* | -0.2478\* | 0.4807 | -0.035 | 3.03 | 0.8166 |
| Tucuruí | 1.57\* | -0.1251\* | 0.2688 | -0.132 | 2.97 | 0.6822 |
| Boa Vista | 1.28\* | -0.0901\* | 0.3171 | 0.134 | 3.65 | 0.6974 |

**GROUP IV**

Table 57. Coefficients of the model 50 Group IV adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 17.22\* | -0.0077ns | 0.1578 | - | - | - |
| Macapá | 19.88\* | -0.0002ns | 0.1147 | - | - | - |
| Barcelos | 17.25ns | -0.0250ns | 0.1236 | - | - | - |
| Eirunepé | 15.71ns | 0.0064ns | 0.0989 | - | - | - |
| Itacoatiara | 16.14ns | 0.0044ns | 0.1236 | - | - | - |
| Lábrea | 17.15ns | -0.0100ns | 0.2147 | - | - | - |
| Manaus | 16.36ns | 0.0160ns | 0.0895 | - | - | - |
| Parintins | 17.59ns | -0.0033ns | 0.1789 | - | - | - |
| S. G. da Cachoeira | 15.28ns | -0.0317ns | 0.1124 | - | - | - |
| Sinop | 19.21ns | 0.0056ns | 0.1378 | - | - | - |
| Belém | 15.09ns | 0.0157ns | 0.1201 | - | - | - |
| Cametá | 20.12ns | -0.0029ns | 0.0894 | - | - | - |
| Conceição do Araguaia | 18.69ns | 0.0385ns | 0.07894 | - | - | - |
| Itaituba | 18.77ns | 0.0093\*\* | 0.1236 | - | - | - |
| Marabá | 18.20ns | 0.0460ns | 0.1125 | - | - | - |
| Monte Alegre | 20.60ns | 0.0077ns | 0.0897 | - | - | - |
| Óbidos | 16.59ns | -0.0258ns | 0.0987 | - | - | - |
| Soure | 19.83ns | -0.0157ns | 0.0879 | - | - | - |
| Tucuruí | 16.91ns | 0.0052ns | 0.1324 | - | - | - |
| Boa Vista | 19.43ns | -0.0613ns | 0.1124 | - | - | - |

Table 58. Coefficients of the model 51 Group IV adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 17.24 | -0.1270 | 0.0892 | - | - | - |
| Macapá | 19.88 | 0.1247 | 0.0752 | - | - | - |
| Barcelos | 17.25 | 0.1535 | 0.0956 | - | - | - |
| Eirunepé | 15.70 | -0.2611 | 0.0867 | - | - | - |
| Itacoatiara | 16.14 | -0.3074 | 0.0796 | - | - | - |
| Lábrea | 17.15 | -0.1442 | 0.1120 | - | - | - |
| Manaus | 16.38 | -0.2282 | 0.1062 | - | - | - |
| Parintins | 17.58 | -0.1601 | 0.0972 | - | - | - |
| S. G. da Cachoeira | 15.34 | 0.0776 | 0.0875 | - | - | - |
| Sinop | 19.20 | -0.2240 | 0.1201 | - | - | - |
| Belém | 15.08 | -0.1613 | 0.0761 | - | - | - |
| Cametá | 20.12 | -0.0732 | 0.0879 | - | - | - |
| Conceição do Araguaia | 18.69 | -0.1605 | 0.0972 | - | - | - |
| Itaituba | 18.76 | -0.1621 | 0.0843 | - | - | - |
| Marabá | 18.23 | -0.3015 | 0.0786 | - | - | - |
| Monte Alegre | 20.60 | -0.0555 | 0.0872 | - | - | - |
| Óbidos | 16.63 | 0.2030 | 0.1021 | - | - | - |
| Soure | 19.81 | 0.0625 | 0.0872 | - | - | - |
| Tucuruí | 16.91 | -0.2638 | 0.0932 | - | - | - |
| Boa Vista | 19.43 | 0.0988 | 0.1014 | - | - | - |

Table 59. Coefficients of the model 52 Group IV adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0426ns | 15.70ns | 0.0789 | - | - | - |
| Macapá | -0.0751ns | 22.59ns | 0.0854 | - | - | - |
| Barcelos | 0.2972ns | 6.56ns | 0.0954 | - | - | - |
| Eirunepé | 0.0517ns | 13.82ns | 0.0894 | - | - | - |
| Itacoatiara | 0.1040ns | 12.39ns | 0.1032 | - | - | - |
| Lábrea | 0.1087ns | 13.26ns | 0.0897 | - | - | - |
| Manaus | -0.0605ns | 18.56ns | 0.0947 | - | - | - |
| Parintins | 0.1455ns | 12.36ns | 0.1011 | - | - | - |
| S. G. da Cachoeira | 0.7456ns | -11.63ns | 0.0964 | - | - | - |
| Sinop | -0.0113ns | 19.60ns | 0.0876 | - | - | - |
| Belém | -0.2780ns | 25.11ns | 0.0942 | - | - | - |
| Cametá | 0.1175ns | 15.90ns | 0.0874 | - | - | - |
| Conceição do Araguaia | -0.1681ns | 24.71ns | 0.0876 | - | - | - |
| Itaituba | 0.0054ns | 18.57ns | 0.0963 | - | - | - |
| Marabá | -0.2435ns | 26.95ns | 0.0942 | - | - | - |
| Monte Alegre | 0.0958ns | 17.13ns | 0.0876 | - | - | - |
| Óbidos | 0.2628ns | 7.11ns | 0.0965 | - | - | - |
| Soure | 0.0331ns | 18.62ns | 0.0876 | - | - | - |
| Tucuruí | 0.0528ns | 15.01ns | 0.0862 | - | - | - |
| Boa Vista | 0.8422ns | -10.89ns | 0.0942 | - | - | - |

Table 60. Coefficients of the model 53 Group IV adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 17.26\* | 0.4210ns | -10.57ns | 10.77ns | 0.0755 | - | - | - |
| Macapá | 15.31\* | -7.08ns | 10.08ns | -9.88ns | 0.0764 | - | - | - |
| Barcelos | 17.30\* | -0.0358\* | -9.82ns | 10.03ns | 0.0879 | - | - | - |
| Eirunepé | 15.70\* | -0.3828ns | -10.69ns | 10.89ns | 0.0921 | - | - | - |
| Itacoatiara | 16.13\* | -0.3964ns | -10.31ns | 10.51ns | 0.0852 | - | - | - |
| Lábrea | 17.19ns | 0.5421ns | -7.95ns | 8.15ns | 0.0854 | - | - | - |
| Manaus | 16.40ns | 0.3241\* | -9.72ns | 9.92ns | 0.0962 | - | - | - |
| Parintins | 17.58ns | -0.4678ns | 10.14ns | -9.94ns | 0.0891 | - | - | - |
| S. G. da Cachoeira | 15.37ns | 0.8166ns | -9.90ns | 10.10ns | 0.0871 | - | - | - |
| Sinop | 19.20ns | -0.0959ns | 9.96ns | -9.76ns | 0.0798 | - | - | - |
| Belém | 15.11\* | 0.3642\* | 9.84ns | -9.64ns | 0.0921 | - | - | - |
| Cametá | 20.14ns | 0.3927ns | 10.18ns | -9.98ns | 0.1003 | - | - | - |
| Conceição do Araguaia | 18.72ns | 0.3551ns | 9.56ns | -9.35ns | 0.0973 | - | - | - |
| Itaituba | 18.81ns | 0.4848\* | -9.89ns | 10.09ns | 0.0876 | - | - | - |
| Marabá | 18.23ns | 0.0978ns | -9.90ns | 10.10ns | 0.0921 | - | - | - |
| Monte Alegre | 20.60\* | -0.0732\* | -9.90ns | 10.10ns | 0.0871 | - | - | - |
| Óbidos | 16.63ns | 0.3960ns | -9.94ns | 10.14ns | 0.0732 | - | - | - |
| Soure | 19.82ns | 0.4741\* | -11.12ns | 11.32ns | 0.0821 | - | - | - |
| Tucuruí | 16.97ns | 0.6642\* | 9.81ns | -9.61ns | 0.0932 | - | - | - |
| Boa Vista | 18.96ns | 1.29\* | 10.10ns | -9.90ns | 0.0863 | - | - | - |

Table 61. Coefficients of the model 54 Group IV adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | 16.91\* | -0.0348ns | 1.78E-04ns | 4.41E-07ns | -1.89E-09ns | 0.0821 | - | - | - |
| Macapá | 18.91ns | -0.1177ns | 1.02E-03ns | -1.75E-06ns | -4.95E-10ns | 0.1328 | - | - | - |
| Barcelos | 17.94ns | -0.0464ns | 1.94E-04ns | 5.63E-07ns | -2.16E-09ns | 0.0599 | - | - | - |
| Eirunepé | 14.53ns | 0.0406ns | -6.45E-04ns | 3.54E-06ns | -5.79E-09ns | 0.0506 | - | - | - |
| Itacoatiara | 15.54\* | -0.0281ns | 2.98E-05ns | 1.57E-06ns | -4.15E-09ns | 0.1358 | - | - | - |
| Lábrea | 16.56ns | -0.0026ns | -1.56E-04ns | 1.51E-06ns | -2.97E-09ns | 0.0548 | - | - | - |
| Manaus | 15.77ns | -0.0424ns | 3.32E-04ns | -8.26E-08ns | -1.55E-09ns | 0.1029 | - | - | - |
| Parintins | 16.69ns | -0.0246ns | -1.18E-04ns | 2.75E-06ns | -6.35E-09ns | 0.1208 | - | - | - |
| S. G. da Cachoeira | 14.95\* | 0.0468ns | -9.31E-04ns | 4.99E-06ns | -7.79E-09ns | 0.0474 | - | - | - |
| Sinop | 18.29ns | 0.0083ns | -7.86E-05ns | 5.52E-07ns | -1.09E-09ns | 0.0157 | - | - | - |
| Belém | 14.69ns | -0.0776ns | 8.29E-04ns | -2.33E-06ns | 1.71E-09ns | 0.1378 | - | - | - |
| Cametá | 17.49\* | 0.0309ns | -4.53E-04ns | 2.93E-06ns | -5.24E-09ns | 0.1948 | - | - | - |
| Conceição do Araguaia | 19.62ns | -0.0827ns | 9.30E-04ns | -3.15E-06ns | 3.16E-09ns | 0.0639 | - | - | - |
| Itaituba | 17.66ns | -0.0111ns | -1.93E-05ns | 1.24E-06ns | -3.10E-09ns | 0.1021 | - | - | - |
| Marabá | 17.16\* | -0.0307ns | 4.85E-04ns | -1.60E-06ns | 1.31E-09ns | 0.1014 | - | - | - |
| Monte Alegre | 19.50ns | -0.0129ns | -8.11E-05ns | 1.83E-06ns | -4.28E-09ns | 0.182 | - | - | - |
| Óbidos | 15.41\* | -0.0525ns | 1.87E-04ns | 1.38E-06ns | -4.21E-09ns | 0.1358 | - | - | - |
| Soure | 18.72ns | -0.0448ns | 2.45E-04ns | 7.01E-07ns | -2.85E-09ns | 0.1653 | - | - | - |
| Tucuruí | 15.58\* | 0.0359ns | -5.06E-04ns | 2.74E-06ns | -4.50E-09ns | 0.0602 | - | - | - |
| Boa Vista | 18.59ns | 0.1038ns | -1.80E-03ns | 9.03E-06ns | -1.35E-08ns | 0.1313 | - | - | - |

**GROUP V**

Table 62. Coefficients of the model 55 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | -0.2695\* | 0.4679\* | 0.7568 | 0.088 | 2.43 | 0.9229 |
| Macapá | 0.2558\* | 0.5091\* | 0.8839 | 0.051 | 1.79 | 0.9687 |
| Barcelos | 0.5172\* | 0.4773\* | 0.7657 | 0.046 | 2.53 | 0.9299 |
| Eirunepé | 0.3047\* | 0.4525\* | 0.7143 | 0.127 | 2.14 | 0.9194 |
| Itacoatiara | -0.2280\* | 0.4582\* | 0.8062 | 0.037 | 2.27 | 0.9423 |
| Lábrea | 0.5570\* | 0.3819\* | 0.7420 | 0.077 | 2.04 | 0.9082 |
| Manaus | -0.2415\* | 0.4676\* | 0.7750 | 0.089 | 2.30 | 0.9402 |
| Parintins | -0.2695\* | 0.4945\* | 0.8710 | -0.006 | 2.00 | 0.9608 |
| S. G. da Cachoeira | 0.2353\* | 0.4756\* | 0.7527 | 0.067 | 2.38 | 0.9262 |
| Sinop | 0.3996\* | 0.4137\* | 0.6331 | 0.080 | 2.62 | 0.8737 |
| Belém | 1.38\* | 0.3672\* | 0.6563 | -0.091 | 2.15 | 0.8885 |
| Cametá | -0.4552\* | 0.4493\* | 0.8332 | 0.016 | 1.61 | 0.9464 |
| Conceição do Araguaia | -0.6734\* | 0.4574\* | 0.8032 | -0.068 | 1.96 | 0.9440 |
| Itaituba | -0.6601\* | 0.4627\* | 0.8573 | 0.104 | 1.73 | 0.9634 |
| Marabá | 0.4847\* | 0.4134\* | 0.7843 | -0.079 | 1.82 | 0.9347 |
| Monte Alegre | -0.6562\* | 0.4752\* | 0.8886 | 0.022 | 1.34 | 0.9723 |
| Óbidos | -0.7625\* | 0.4080\* | 0.7864 | -0.065 | 2.03 | 0.9398 |
| Soure | 0.4492\* | 0.3707\* | 0.8176 | -0.117 | 1.89 | 0.9447 |
| Tucuruí | -0.3695\* | 0.3542\* | 0.6856 | -0.060 | 2.00 | 0.8932 |
| Boa Vista | -0.3183\* | 0.4346\* | 0.8339 | 0.052 | 1.81 | 0.9517 |

Table 63. Coefficients of the model 56 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.02\* | 0.0098\* | 0.1902 | 0.151 | 4.30 | 0.5540 |
| Macapá | 5.98\* | 0.0317\* | 0.5988 | 0.068 | 3.24 | 0.8737 |
| Barcelos | 3.73\* | 0.0247\* | 0.3858 | 0.204 | 4.09 | 0.7276 |
| Eirunepé | 1.56ns | 0.0789ns | 0.2369 | - | - | - |
| Itacoatiara | 3.90\* | 0.0276\* | 0.4222 | 0.016 | 4.02 | 0.7453 |
| Lábrea | 3.08\* | 0.0238\* | 0.4253 | -0.002 | 2.78 | 0.7914 |
| Manaus | 1.64\* | 0.0172\* | 0.299 | 0.067 | 4.21 | 0.6816 |
| Parintins | 3.71\* | 0.0253\* | 0.4542 | 0.140 | 3.81 | 0.8003 |
| S. G. da Cachoeira | 1.03\* | 0.1265ns | 0.2314 | - | - | - |
| Sinop | 1.21ns | 0.2157ns | 0.2147 | - | - | - |
| Belém | 2.82\* | 0.0246\* | 0.3177 | -0.066 | 2.97 | 0.7140 |
| Cametá | 1.95\* | 0.0170\* | 0.3155 | -0.125 | 3.15 | 0.6906 |
| Conceição do Araguaia | 1.12\* | 0.0110\* | 0.1692 | 0.038 | 4.00 | 0.6165 |
| Itaituba | 1.85\* | 0.0172\* | 0.2308 | -0.025 | 4.28 | 0.6175 |
| Marabá | 1.78\* | 0.0166\* | 0.2145 | -0.122 | 3.51 | 0.6339 |
| Monte Alegre | 1.96\* | 0.0171\* | 0.369 | -0.053 | 3.46 | 0.7185 |
| Óbidos | 1.91\* | 0.0186\* | 0.4592 | -0.066 | 3.13 | 0.8152 |
| Soure | 3.44\* | 0.0241\* | 0.4761 | -0.025 | 3.04 | 0.8087 |
| Tucuruí | 1.45\* | 0.0146\* | 0.2790 | -0.124 | 2.95 | 0.6829 |
| Boa Vista | 1.05\* | 0.0100\* | 0.3262 | 0.141 | 3.62 | 0.6995 |

Table 64. Coefficients of the model 57 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.3308\* | -0.0008\* | 0.4479\* | 0.7598 | 0.095 | 2.41 | 0.9240 |
| Macapá | 0.5539\* | -0.0034\* | 0.4462\* | 0.8929 | 0.050 | 1.69 | 0.9727 |
| Barcelos | 0.6501\* | -0.0040\* | 0.4170\* | 0.7832 | 0.044 | 2.40 | 0.9386 |
| Eirunepé | 0.3503\* | -0.0009\* | 0.4477\* | 0.7275 | 0.122 | 2.12 | 0.9224 |
| Itacoatiara | 0.3310\* | -0.0012\* | 0.4379\* | 0.8076 | 0.032 | 2.28 | 0.9421 |
| Lábrea | 0.5978\* | -0.0033\* | 0.3283\* | 0.7576 | 0.072 | 1.96 | 0.9172 |
| Manaus | 0.2972\* | -0.0007\* | 0.4533\* | 0.7761 | 0.086 | 2.30 | 0.9404 |
| Parintins | 0.4599\* | -0.0025\* | 0.4524\* | 0.8774 | -0.006 | 1.93 | 0.9637 |
| S. G. da Cachoeira | 0.0662\* | 0.0019\* | 0.5035\* | 0.7641 | 0.084 | 2.33 | 0.9293 |
| Sinop | 0.3587\* | -0.0003ns | 0.4024\* | 0.6342 | - | - | - |
| Belém | 0.4904\* | -0.0031\* | 0.3210\* | 0.6784 | -0.088 | 2.07 | 0.8989 |
| Cametá | 0.3041\* | -0.0003ns | 0.4440\* | 0.8334 | - | - | - |
| Conceição do Araguaia | 0.1855\* | 0.0008\* | 0.4830\* | 0.8067 | -0.079 | 1.95 | 0.9446 |
| Itaituba | 0.3291\* | -0.0006\* | 0.4544\* | 0.858 | 0.102 | 1.73 | 0.9635 |
| Marabá | 0.3738\* | -0.0009\* | 0.3961\* | 0.7871 | -0.076 | 1.81 | 0.9350 |
| Monte Alegre | 0.2181\* | 0.0006\* | 0.4885\* | 0.8893 | 0.023 | 1.33 | 0.9726 |
| Óbidos | 0.4499\* | -0.0024\* | 0.3538\* | 0.8014 | -0.073 | 1.94 | 0.9467 |
| Soure | 0.2330\* | 0.0012\* | 0.3906\* | 0.8189 | -0.123 | 1.89 | 0.9446 |
| Tucuruí | 0.4179\* | -0.0015\* | 0.3264\* | 0.6948 | -0.059 | 1.96 | 0.8981 |
| Boa Vista | 0.3674\* | -0.0008\* | 0.4173\* | 0.8376 | 0.043 | 1.79 | 0.9533 |

Table 65. Coefficients of the model 58 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.8760\* | -0.0704\* | 0.3238\* | 0.6310 | -0.244 | 2.67 | 0.9223 |
| Macapá | 6.89\* | -0.5331\* | 0.3338\* | 0.8374 | -0.104 | 1.98 | 0.9656 |
| Barcelos | 4.06\* | -0.4150\* | 0.2562\* | 0.6459 | -0.638 | 3.15 | 0.9230 |
| Eirunepé | 0.7776\* | -0.0559\* | 0.2550\* | 0.4578 | -0.595 | 3.22 | 0.8803 |
| Itacoatiara | 0.8792ns | -0.2387ns | 0.1014ns | 0.2121 | - | - | - |
| Lábrea | 5.29\* | -0.5008\* | 0.2006\* | 0.3632 | -0.276 | 2.99 | 0.8532 |
| Manaus | 0.8101\* | -0.0571\* | 0.3488\* | 0.6508 | -0.394 | 2.97 | 0.9187 |
| Parintins | 2.89\* | -0.3382\* | 0.3612\* | 0.8283 | -0.177 | 2.31 | 0.9543 |
| S. G. da Cachoeira | 1.36\*\* | -0.4589ns | 0.1712ns | 0.1425 | - | - | - |
| Sinop | 0.8786\* | -0.0644\* | 0.2614\* | 0.3639 | -0.327 | 3.18 | 0.8615 |
| Belém | 10.33\* | -0.6866\* | 0.3070\* | 0.5838 | -0.234 | 2.38 | 0.8799 |
| Cametá | 1.03\* | -0.0971\* | 0.3645\* | 0.7764 | -0.074 | 1.77 | 0.9416 |
| Conceição do Araguaia | 0.6237\* | 0.0170ns | 0.3736\* | 0.7278 | - | - | - |
| Itaituba | 0.9342\* | -0.0745\* | 0.3265\* | 0.7546 | -0.345 | 2.16 | 0.9553 |
| Marabá | 1.33\* | -0.1701\* | 0.2858\* | 0.6041 | -0.451 | 2.59 | 0.9019 |
| Monte Alegre | 0.7186\* | -0.0054ns | 0.3866\* | 0.8331 | - | - | - |
| Óbidos | 2.63\* | -0.3500\* | 0.3236\* | 0.6844 | -0.399 | 2.60 | 0.9211 |
| Soure | 0.6369\* | 0.0083ns | 0.2399\* | 0.5762 | - | - | - |
| Tucuruí | 2.45\* | -0.3337\* | 0.2582\* | 0.5598 | -0.265 | 2.32 | 0.8814 |
| Boa Vista | 0.9779\* | -0.0879\* | 0.3220\* | 0.7592 | -0.133 | 2.20 | 0.9384 |

Table 66. Coefficients of the model 59 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.6791\* | 0.0765ns | -0.0697\* | 0.3204\* | 0.6314 | - | - | - |
| Macapá | 1.07ns | 0.3705\* | -0.3863\* | 0.3303\* | 0.8380 | - | - | - |
| Barcelos | 0.1119ns | 0.7173\* | -0.1368ns | 0.2462\* | 0.6495 | - | - | - |
| Eirunepé | 0.1819\* | 0.4238\* | -0.0413\* | 0.2483\* | 0.4637 | -0.627 | 3.86 | 0.8816 |
| Itacoatiara | 1.42ns | 0.0013ns | -0.1935ns | 0.3451\* | 0.7030 | - | - | - |
| Lábrea | 0.6371ns | 0.5427\* | -0.4267\* | 0.1929\* | 0.3729 | - | - | - |
| Manaus | 0.0813ns | 0.4814\* | 0.1029\* | 0.3400\* | 0.6524 | - | - | - |
| Parintins | 0.1412ns | 0.5849\* | -0.0926ns | 0.3496\* | 0.8297 | - | - | - |
| S. G. da Cachoeira | 0.0533ns | 0.2317ns | 0.3877\* | 0.3604\* | 0.6581 | - | - | - |
| Sinop | 0.7348\* | 0.0480ns | -0.0591\* | 0.2603\* | 0.3641 | - | - | - |
| Belém | 144.60ns | -0.5063\* | -0.9082\* | 0.3058\* | 0.5857 | - | - | - |
| Cametá | 0.3614ns | 0.2127ns | -0.0181ns | 0.3609\* | 0.7768 | - | - | - |
| Conceição do Araguaia | 2.35\* | -0.3328\* | -0.0375\* | 0.3752\* | 0.7326 | -0.353 | 4.27 | 0.9267 |
| Itaituba | 0.2252\* | 0.2961\* | 0.0262ns | 0.3193\* | 0.7558 | - | - | - |
| Marabá | 2.50\* | -0.1508ns | -0.2016\* | 0.2867\* | 0.6046 | - | - | - |
| Monte Alegre | 2.04ns | -0.2092ns | -0.0867ns | 0.3895\* | 0.8334 | - | - | - |
| Óbidos | 0.3982ns | 0.3758ns | -0.2005ns | 0.3200\* | 0.6851 | - | - | - |
| Soure | 0.5586ns | 0.0285ns | 0.0166ns | 0.2396\* | 0.5762 | - | - | - |
| Tucuruí | 0.3551ns | 0.4167\* | -0.2055\* | 0.2533\* | 0.5618 | - | - | - |
| Boa Vista | 0.0277\* | 0.7991\* | 0.1234\* | 0.3008\* | 0.7671 | -0.124 | 4.37 | 0.9413 |

Table 67. Coefficients of the model 60 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | -0.1738\* | 0.0207\* | -0.0008\* | -0.0329\* | 1.26\* | 0.7819 | 0.052 | 2.31 | 0.9326 |
| Macapá | -0.3447\* | 0.0310\* | -0.0025\* | -0.0491\* | 1.77\* | 0.9064 | 0.049 | 1.58 | 0.9762 |
| Barcelos | -0.8957\* | 0.0534\* | -0.0020\* | -0.0957\* | 2.92\* | 0.8374 | 0.006 | 2.07 | 0.9571 |
| Eirunepé | -0.3401\* | 0.0261\* | -0.0005\* | -0.0387\* | 1.42\* | 0.7734 | 0.135 | 1.91 | 0.9387 |
| Itacoatiara | -0.4143\* | 0.0288\* | -0.0013\* | -0.0550\* | 1.91\* | 0.8298 | 0.008 | 2.12 | 0.9512 |
| Lábrea | -0.0960ns | 0.0234\* | -0.0023\* | -0.0277\* | 1.05\* | 0.781 | - | - | - |
| Manaus | -0.5787\* | 0.0311\* | -0.0002ns | -0.0560\* | 1.99\* | 0.8092 | - | - | - |
| Parintins | -0.4274\* | 0.0384\* | -0.0038\* | -0.0656\* | 2.18\* | 0.9043 | 0.056 | 1.76 | 0.9705 |
| S. G. da Cachoeira | -0.5929\* | 0.0229\* | 0.0027\* | -0.0417\* | 1.59\* | 0.7772 | 0.056 | 2.23 | 0.9370 |
| Sinop | -0.4543\* | 0.0317\* | 0.0001ns | -0.0489\* | 1.62\* | 0.6689 | - | - | - |
| Belém | 0.5522\* | -0.0002ns | -0.0038\* | -0.0080\* | 0.5350\* | 0.6792 | - | - | - |
| Cametá | -0.5198\* | 0.0304\* | -0.0001ns | -0.0457\* | 1.67\* | 0.8487 | - | - | - |
| Conceição do Araguaia | -0.5168\* | 0.0281\* | 0.0006\* | -0.0448\* | 1.64\* | 0.8317 | -0.101 | 1.79 | 0.9547 |
| Itaituba | -0.8170\* | 0.0409\* | 0.0002ns | -0.0666\* | 2.25\* | 0.9031 | - | - | - |
| Marabá | -0.5911\* | 0.0352\* | -0.0002ns | -0.0559\* | 1.85\* | 0.8186 | - | - | - |
| Monte Alegre | -0.3233\* | 0.0268\* | -0.0014\* | -0.0569\* | 1.99\* | 0.9102 | 0.054 | 1.22 | 0.9773 |
| Óbidos | -0.3114ns | 0.0290\* | -0.0022\* | -0.0446\* | 1.51\* | 0.8176 | - | - | - |
| Soure | -0.8646\* | 0.0390\* | 0.0019\* | -0.0674\* | 2.23\* | 0.8466 | -0.108 | 1.75 | 0.9526 |
| Tucuruí | 0.0923ns | 0.0095\* | -0.0005ns | -0.0028ns | 0.3955\* | 0.6975 | - | - | - |
| Boa Vista | -0.7143\* | 0.0349\* | 0.0012\* | -0.0369\* | 1.41\* | 0.8566 | 0.053 | 1.65 | 0.9613 |

Table 68. Coefficients of the model 61 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 23.57\* | -0.1947\* | 0.3018 | 0.146 | 3.94 | 0.6750 |
| Macapá | 38.12\* | -0.5585\* | 0.6647 | 0.067 | 2.95 | 0.9016 |
| Barcelos | 36.02\* | -0.4871\* | 0.5722 | 0.110 | 3.34 | 0.8604 |
| Eirunepé | 10.15\*\* | -0.0234ns | 0.2314 | - | - | - |
| Itacoatiara | 32.18\* | -0.4454\* | 0.5401 | 0.020 | 3.61 | 0.8177 |
| Lábrea | 28.70\* | -0.3505\* | 0.4946 | 0.031 | 2.71 | 0.8097 |
| Manaus | 26.15\* | -0.3057\* | 0.4075 | 0.101 | 3.86 | 0.7585 |
| Parintins | 36.46\* | -0.4948\* | 0.5812 | 0.164 | 3.36 | 0.8642 |
| S. G. da Cachoeira | 24.71\* | -0.2538\* | 0.2478 | 0.173 | 4.13 | 0.6237 |
| Sinop | 21.44\* | -0.0945\* | 0.1650 | 0.129 | 3.98 | 0.4913 |
| Belém | 26.32\* | -0.3370\* | 0.3927 | -0.032 | 2.81 | 0.7495 |
| Cametá | 31.15\* | -0.3649\* | 0.4229 | -0.104 | 2.89 | 0.7495 |
| Conceição do Araguaia | 22.89\* | -0.1843\* | 0.3469 | 0.124 | 3.51 | 0.7214 |
| Itaituba | 28.48\* | -0.3235\* | 0.3749 | 0.033 | 3.84 | 0.7162 |
| Marabá | 26.24\* | -0.2594\* | 0.3878 | -0.036 | 3.10 | 0.7172 |
| Monte Alegre | 31.04\* | -0.3508\* | 0.4770 | -0.021 | 3.17 | 0.7745 |
| Óbidos | 26.06\* | -0.2977\* | 0.5696 | -0.014 | 2.79 | 0.8647 |
| Soure | 39.06\* | -0.5429\* | 0.5221 | -0.022 | 2.91 | 0.8305 |
| Tucuruí | 25.17\* | -0.2406\* | 0.3551 | -0.104 | 2.79 | 0.7227 |
| Boa Vista | 24.66\* | -0.2311\* | 0.4427 | 0.144 | 3.28 | 0.7734 |

Table 69. Coefficients of the model 62 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0324\* | 0.1163\* | 0.3607\* | 0.8035\* | 0.8052 | 0.030 | 2.14 | 0.9431 |
| Macapá | 0.0396\* | 0.1123\* | 0.4516\* | 0.8104\* | 0.9071 | 0.059 | 1.56 | 0.9766 |
| Barcelos | 0.0351\* | 0.1127\* | 0.3832\* | 0.6435\* | 0.8262 | 0.007 | 2.17 | 0.9530 |
| Eirunepé | 0.0013ns | 0.1350\* | 0.3097\* | 0.6808\* | 0.7979 | - | - | - |
| Itacoatiara | 0.0479\* | 0.0936\* | 0.3885\* | 0.7413\* | 0.8376 | 0.028 | 2.07 | 0.9538 |
| Lábrea | 0.1265\* | 0.0815\* | 0.3178\* | 0.6830\* | 0.7777 | 0.154 | 1.97 | 0.9135 |
| Manaus | 0.0518\* | 0.0969\* | 0.4094\* | 0.8466\* | 0.7992 | 0.083 | 2.19 | 0.9474 |
| Parintins | 0.0733\* | 0.0728\* | 0.4662\* | 0.7124\* | 0.9003 | 0.087 | 1.83 | 0.9675 |
| S. G. da Cachoeira | -0.0453\* | 0.1738\* | 0.2741\* | 0.9689\* | 0.8673 | -0.018 | 1.86 | 0.9588 |
| Sinop | 0.1515\* | 0.0821\* | 0.3388\* | 0.8233\* | 0.6650 | 0.077 | 2.46 | 0.8921 |
| Belém | 0.0794\* | 0.0846\* | 0.3203\* | 1.25\* | 0.6658 | -0.077 | 2.10 | 0.8947 |
| Cametá | 0.1109\* | 0.0687\* | 0.4474\* | 0.7844\* | 0.852 | 0.002 | 1.50 | 0.9535 |
| Conceição do Araguaia | 0.1327\* | 0.0410\* | 0.4448\* | 0.6997\* | 0.8263 | -0.068 | 1.89 | 0.9496 |
| Itaituba | 0.1042\* | 0.0718\* | 0.4294\* | 0.6683\* | 0.8954 | 0.057 | 1.44 | 0.9755 |
| Marabá | 0.0935\* | 0.0862\* | 0.3600\* | 0.6808\* | 0.8256 | -0.067 | 1.67 | 0.9463 |
| Monte Alegre | 0.1331\* | 0.0499\* | 0.4823\* | 0.7233\* | 0.9068 | 0.002 | 1.23 | 0.9773 |
| Óbidos | 0.0487\* | 0.0876\* | 0.3483\* | 0.8363\* | 0.8065 | -0.039 | 1.93 | 0.9469 |
| Soure | 0.2053\* | 0.0450\* | 0.4053\* | 0.6424\* | 0.8477 | -0.112 | 1.69 | 0.9562 |
| Tucuruí | 0.1230\* | 0.0836\* | 0.3203\* | 0.9069\* | 0.7108 | -0.086 | 1.90 | 0.9078 |
| Boa Vista | 0.1176\* | 0.0766\* | 0.4036\* | 0.7679\* | 0.8503 | 0.039 | 1.72 | 0.9579 |

Table 70. Coefficients of the model 63 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.1333\* | 0.0053\* | 0.4491\* | 0.7615 | 0.065 | 2.40 | 0.9253 |
| Macapá | -0.2121\* | 0.0183\* | 0.4465\* | 0.8943 | 0.061 | 1.70 | 0.9724 |
| Barcelos | -0.3399\* | 0.0250\* | 0.3994\* | 0.7919 | 0.029 | 2.38 | 0.9403 |
| Eirunepé | -0.1332\* | 0.0165\* | 0.4190\* | 0.7338 | 0.084 | 2.02 | 0.9305 |
| Itacoatiara | 0.0577ns | 0.0067\* | 0.4327\* | 0.8084 | - | - | - |
| Lábrea | -0.0514ns | 0.0143\* | 0.3498\* | 0.7645 | - | - | - |
| Manaus | 0.0821\* | 0.0062\* | 0.4423\* | 0.7779 | 0.080 | 2.28 | 0.9415 |
| Parintins | -0.1163\* | 0.0140\* | 0.4401\* | 0.8785 | 0.001 | 1.95 | 0.9631 |
| S. G. da Cachoeira | 0.3810\* | -0.0058\* | 0.4941\* | 0.7558 | 0.079 | 2.38 | 0.9261 |
| Sinop | 0.1964\* | 0.0056\* | 0.3962\* | 0.6380 | 0.059 | 2.57 | 0.8798 |
| Belém | -0.0702\* | 0.0112\* | 0.3404\* | 0.6682 | -0.092 | 2.10 | 0.8948 |
| Cametá | 0.1783\* | 0.0039\* | 0.4352\* | 0.8342 | 0.015 | 1.61 | 0.9465 |
| Conceição do Araguaia | 0.3093\* | -0.0020\* | 0.4634\* | 0.8038 | -0.066 | 1.97 | 0.9435 |
| Itaituba | 0.0888\* | 0.0075\* | 0.4355\* | 0.8616 | 0.092 | 1.72 | 0.9644 |
| Marabá | 0.0486ns | 0.0096\* | 0.3928\* | 0.7927 | - | - | - |
| Monte Alegre | 0.3531\* | -0.0032\* | 0.4877\* | 0.8892 | 0.026 | 1.33 | 0.9726 |
| Óbidos | -0.1163\* | 0.0141\* | 0.3547\* | 0.8017 | -0.058 | 1.94 | 0.9464 |
| Soure | 0.2067\* | 0.0050\* | 0.3566\* | 0.8183 | -0.114 | 1.88 | 0.9452 |
| Tucuruí | 0.0149ns | 0.0108\* | 0.3226\* | 0.6971 | - | - | - |
| Boa Vista | 0.0644\* | 0.0092\* | 0.3985\* | 0.8428 | 0.041 | 1.76 | 0.9556 |

Table 71. Coefficients of the model 64 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2715\* | -0.0005ns | 0.4674\* | 0.7569 | - | - | - |
| Macapá | 0.1822\* | 0.0031ns | 0.5065\* | 0.8841 | - | - | - |
| Barcelos | 0.2267\* | 0.0027ns | 0.4790\* | 0.7661 | - | - | - |
| Eirunepé | 0.1253\* | 0.0070\* | 0.4641\* | 0.7200 | 0.123 | 2.13 | 0.9205 |
| Itacoatiara | 0.1788\* | 0.0021ns | 0.4557\* | 0.8064 | - | - | - |
| Lábrea | 0.2448\* | 0.0030\* | 0.3875\* | 0.7434 | 0.075 | 2.03 | 0.9096 |
| Manaus | 0.2205\* | 0.0009ns | 0.4662\* | 0.7750 | - | - | - |
| Parintins | 0.1454\* | 0.0038\* | 0.4882\* | 0.8716 | -0.008 | 1.99 | 0.9611 |
| S. G. da Cachoeira | 0.6770\* | -0.0190\* | 0.4657\* | 0.7825 | 0.079 | 2.31 | 0.9309 |
| Sinop | 0.3588\* | -0.0013ns | 0.4094\* | 0.6335 | - | - | - |
| Belém | 0.1943\* | 0.0011ns | 0.3671\* | 0.6563 | - | - | - |
| Cametá | 0.3145\* | -0.0015ns | 0.4517\* | 0.8334 | - | - | - |
| Conceição do Araguaia | 0.3076\* | -0.0020\* | 0.4513\* | 0.8041 | -0.061 | 1.96 | 0.9437 |
| Itaituba | 0.1561\* | 0.0053\* | 0.4608\* | 0.8591 | 0.095 | 1.72 | 0.9639 |
| Marabá | 0.2487\* | 0.0019\* | 0.4164\* | 0.7848 | -0.079 | 1.82 | 0.9348 |
| Monte Alegre | 0.4189\* | -0.0064\* | 0.4866\* | 0.8914 | 0.024 | 1.32 | 0.9733 |
| Óbidos | 0.0598ns | 0.0075\* | 0.4089\* | 0.7888 | - | - | - |
| Soure | 0.4657\* | -0.0055\* | 0.3887\* | 0.8203 | -0.120 | 1.87 | 0.9453 |
| Tucuruí | 0.2267\* | 0.0027\* | 0.3519\* | 0.6863 | -0.059 | 1.99 | 0.8934 |
| Boa Vista | 0.1766\* | 0.0054\* | 0.4306\* | 0.8362 | 0.053 | 1.81 | 0.9524 |

Table 72. Coefficients of the model 65 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0198ns | 0.0085\* | 0.4099\* | 0.7756 | - | - | - |
| Macapá | -0.3213\* | 0.0200\* | 0.4085\* | 0.9013 | 0.068 | 1.61 | 0.9754 |
| Barcelos | -0.2172\* | 0.0171\* | 0.3694\* | 0.8004 | 0.014 | 2.31 | 0.9448 |
| Eirunepé | -0.1792\* | 0.0157\* | 0.3496\* | 0.7705 | 0.057 | 1.91 | 0.9391 |
| Itacoatiara | -0.1741\* | 0.0142\* | 0.3652\* | 0.8243 | 0.029 | 2.22 | 0.9465 |
| Lábrea | -0.0058ns | 0.0106\* | 0.3207\* | 0.7643 | - | - | - |
| Manaus | -0.0555\* | 0.0100\* | 0.4089\* | 0.7873 | 0.074 | 2.23 | 0.9451 |
| Parintins | -0.1833\* | 0.0148\* | 0.4073\* | 0.8866 | 0.036 | 1.87 | 0.9661 |
| S. G. da Cachoeira | -0.3665\* | 0.0211\* | 0.3159\* | 0.7995 | -0.032 | 2.14 | 0.9438 |
| Sinop | 0.1648\* | 0.0058\* | 0.3720\* | 0.645 | 0.064 | 2.54 | 0.8828 |
| Belém | -0.0173ns | 0.0078\* | 0.3349\* | 0.6626 | - | - | - |
| Cametá | -0.1252\* | 0.0136\* | 0.3919\* | 0.8452 | 0.006 | 1.56 | 0.9502 |
| Conceição do Araguaia | 0.2411\* | 0.0006ns | 0.4524\* | 0.8033 | - | - | - |
| Itaituba | -0.0246ns | 0.0104\* | 0.3975\* | 0.8709 | - | - | - |
| Marabá | -0.0675\* | 0.0124\* | 0.3402\* | 0.8056 | -0.056 | 1.76 | 0.9397 |
| Monte Alegre | 0.2118\* | 0.0022\* | 0.4634\* | 0.8891 | 0.018 | 1.34 | 0.9724 |
| Óbidos | -0.0316ns | 0.0090\* | 0.3467\* | 0.8008 | - | - | - |
| Soure | -0.1615\* | 0.0168\* | 0.3321\* | 0.8265 | -0.126 | 1.81 | 0.9497 |
| Tucuruí | -0.0344ns | 0.0110\* | 0.3072\* | 0.7112 | - | - | - |
| Boa Vista | 0.0559\* | 0.0082\* | 0.3808\* | 0.8447 | 0.042 | 1.74 | 0.9564 |

Table 73. Coefficients of the model 66 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2032\* | 0.0047\* | -0.0006\* | 0.4352\* | 0.7633 | 0.073 | 2.39 | 0.9260 |
| Macapá | 0.0489ns | 0.0128\* | -0.0014\* | 0.4397\* | 0.8948 | - | - | - |
| Barcelos | -0.1392ns | 0.0210\* | -0.0011\* | 0.3951\* | 0.7926 | - | - | - |
| Eirunepé | -0.0562ns | 0.0151\* | -0.0006\* | 0.4189\* | 0.7587 | - | - | - |
| Itacoatiara | 0.0208ns | 0.0075\* | 0.0002ns | 0.4333\* | 0.8084 | - | - | - |
| Lábrea | 0.2139\* | 0.0119\* | -0.0024\* | 0.3160\* | 0.7723 | 0.069 | 1.91 | 0.9243 |
| Manaus | -0.0731ns | 0.0097\* | 0.0007\* | 0.4441\* | 0.7784 | - | - | - |
| Parintins | 0.0420ns | 0.0105\* | -0.0008ns | 0.4400\* | 0.8787 | - | - | - |
| S. G. da Cachoeira | -0.2781\* | 0.0093\* | 0.0032\* | 0.4927\* | 0.7668 | 0.076 | 2.30 | 0.9314 |
| Sinop | 0.1893\* | 0.0058\* | 0.0001ns | 0.3971\* | 0.638 | - | - | - |
| Belém | 0.6280\* | -0.0034ns | -0.0037\* | 0.3207\* | 0.6787 | - | - | - |
| Cametá | -0.0049ns | 0.0081\* | 0.0009\* | 0.4362\* | 0.8348 | - | - | - |
| Conceição do Araguaia | 0.1518\* | 0.0010ns | 0.0009\* | 0.4827\* | 0.8068 | - | - | - |
| Itaituba | -0.0559ns | 0.0106\* | 0.0008\* | 0.4364\* | 0.8624 | - | - | - |
| Marabá | 0.0403ns | 0.0097\* | 0.0001ns | 0.3933\* | 0.7927 | - | - | - |
| Monte Alegre | 0.2558\* | -0.0010ns | 0.0005ns | 0.4891\* | 0.8893 | - | - | - |
| Óbidos | 0.1371ns | 0.0081\* | -0.0012ns | 0.3511\* | 0.8025 | - | - | - |
| Soure | -0.4409\* | 0.0183\* | 0.0035\* | 0.3764\* | 0.8241 | -0.124 | 1.86 | 0.9460 |
| Tucuruí | 0.1180ns | 0.0084\* | -0.0005ns | 0.3208\* | 0.6975 | - | - | - |
| Boa Vista | -0.1739\* | 0.0154\* | 0.0010\* | 0.3955\* | 0.8443 | 0.046 | 1.74 | 0.9562 |

Table 74. Coefficients of the model 67 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.3394\* | 0.0213\* | -0.0052\* | 0.3329 | 0.022 | 3.86 | 0.7359 |
| Macapá | 0.3654ns | 0.0384\* | -0.0114\* | 0.6359 | - | - | - |
| Barcelos | -0.4818\* | 0.0559\* | -0.0061\* | 0.5128 | 0.086 | 3.60 | 0.8315 |
| Eirunepé | -0.4322\* | 0.0348\* | -0.0006\* | 0.1660 | 0.008 | 4.10 | 0.5622 |
| Itacoatiara | -0.0796ns | 0.0389\* | -0.0067\* | 0.4793 | - | - | - |
| Lábrea | 0.8216\* | 0.0204\* | -0.0113\* | 0.5041 | -0.028 | 2.60 | 0.8457 |
| Manaus | -0.6367\* | 0.0445\* | -0.0019\* | 0.3744 | 0.001 | 3.90 | 0.7647 |
| Parintins | -1.45\* | 0.0751\* | -0.0012ns | 0.5913 | - | - | - |
| S. G. da Cachoeira | -1.26\* | 0.0522\* | 0.0037\* | 0.1981 | 0.216 | 4.25 | 0.5788 |
| Sinop | 0.3783\* | 0.0159\* | -0.0035\* | 0.1384 | -0.056 | 3.98 | 0.6126 |
| Belém | 1.47\* | -0.0055\* | -0.0115\* | 0.3118 | -0.071 | 2.99 | 0.7142 |
| Cametá | -0.9343\* | 0.0560\* | -0.0008ns | 0.3916 | - | - | - |
| Conceição do Araguaia | 0.8642\* | 0.0041\* | -0.0064\* | 0.2084 | 0.011 | 3.88 | 0.6757 |
| Itaituba | -1.06\* | 0.0577\* | -0.0002ns | 0.3927 | - | - | - |
| Marabá | 0.6548\* | 0.0164\* | -0.0076\* | 0.2414 | -0.124 | 3.49 | 0.6658 |
| Monte Alegre | -0.0521ns | 0.0352\* | -0.0047\* | 0.4130 | - | - | - |
| Óbidos | 0.2422ns | 0.0252\* | -0.0059\* | 0.5069 | - | - | - |
| Soure | -0.5953\* | 0.0566\* | -0.0055\* | 0.5421 | -0.047 | 2.86 | 0.8440 |
| Tucuruí | -0.0744ns | 0.0299\* | -0.0033\* | 0.3089 | - | - | - |
| Boa Vista | -1.44\* | 0.0635\* | 0.0030\* | 0.4643 | 0.124 | 3.21 | 0.8007 |

Table 75. Coefficients of the model 68 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 92.21\* | -0.8038\* | 0.4664 | 0.072 | 3.40 | 0.8068 |
| Macapá | 153.55\* | -1.69\* | 0.7094 | 0.031 | 2.78 | 0.9182 |
| Barcelos | 130.07\* | -1.37\* | 0.653 | 0.041 | 3.08 | 0.8938 |
| Eirunepé | 23.14ns | -2.36ns | 0.3478 | - | - | - |
| Itacoatiara | 129.66\* | -1.39\* | 0.6205 | -0.022 | 3.27 | 0.8668 |
| Lábrea | 103.18\* | -0.9999\* | 0.5475 | 0.089 | 2.64 | 0.8240 |
| Manaus | 109.19\* | -1.11\* | 0.4688 | 0.062 | 3.66 | 0.8105 |
| Parintins | 148.81\* | -1.58\* | 0.6522 | 0.172 | 3.14 | 0.8927 |
| S. G. da Cachoeira | 104.38\* | -1.03\* | 0.5048 | 0.043 | 3.35 | 0.8176 |
| Sinop | 79.71\* | -0.5560\* | 0.2845 | 0.048 | 3.62 | 0.6867 |
| Belém | 107.69\* | -1.16\* | 0.4282 | -0.055 | 2.74 | 0.7869 |
| Cametá | 131.69\* | -1.36\* | 0.4701 | -0.157 | 2.77 | 0.7965 |
| Conceição do Araguaia | 90.16\* | -0.8072\* | 0.4655 | 0.063 | 3.20 | 0.8113 |
| Itaituba | 116.78\* | -1.18\* | 0.474 | -0.014 | 3.51 | 0.8029 |
| Marabá | 103.22\* | -0.9714\* | 0.4707 | -0.071 | 2.93 | 0.7900 |
| Monte Alegre | 125.27\* | -1.23\* | 0.4996 | -0.077 | 3.08 | 0.8108 |
| Óbidos | 98.89\* | -0.9774\* | 0.6011 | -0.051 | 2.70 | 0.8854 |
| Soure | 176.90\* | -1.94\* | 0.4419 | -0.071 | 3.14 | 0.7938 |
| Tucuruí | 95.93\* | -0.8391\* | 0.3715 | -0.155 | 2.74 | 0.7659 |
| Boa Vista | 94.33\* | -0.8366\* | 0.4786 | 0.072 | 3.16 | 0.8164 |

Table 76. Coefficients of the model 69 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0299ns | 0.0088\* | 0.0282\* | -0.0013\* | 0.5689 | - | - | - |
| Macapá | -0.3428\* | 0.0374\* | 0.0215\* | -0.0060\* | 0.7351 | 0.075 | 2.64 | 0.9272 |
| Barcelos | 0.3275\* | 0.0168\* | 0.0196\* | -0.0068\* | 0.6540 | 0.031 | 3.00 | 0.8987 |
| Eirunepé | -0.1219\* | 0.0093\* | 0.0322\* | -0.0006\* | 0.6346 | -0.053 | 2.54 | 0.8867 |
| Itacoatiara | -0.6016\* | 0.0333\* | 0.0167\* | -0.0016\* | 0.6521 | -0.006 | 3.13 | 0.8815 |
| Lábrea | 0.3212\* | 0.0177\* | 0.0077\* | -0.0063\* | 0.5709 | 0.099 | 2.60 | 0.8421 |
| Manaus | -0.2166\* | 0.0201\* | 0.0260\* | -0.0025\* | 0.5136 | 0.049 | 3.46 | 0.8404 |
| Parintins | -0.6367\* | 0.0404\* | 0.0148\* | -0.0030\* | 0.6788 | 0.202 | 3.12 | 0.8949 |
| S. G. da Cachoeira | -0.4500\* | 0.0168\* | 0.0338\* | 0.0008\* | 0.7905 | -0.086 | 2.32 | 0.9323 |
| Sinop | -0.1996\* | 0.0094\* | 0.0235\* | 0.0020\* | 0.3238 | 0.049 | 3.53 | 0.7339 |
| Belém | 0.3084\* | 0.0128\* | 0.0195\* | -0.0062\* | 0.4382 | -0.066 | 2.71 | 0.7938 |
| Cametá | -0.7784\* | 0.0450\* | 0.0128\* | -0.0031\* | 0.5593 | -0.122 | 2.53 | 0.8401 |
| Conceição do Araguaia | -0.2704\* | 0.0164\* | 0.0183\* | 0.0004ns | 0.4982 | - | - | - |
| Itaituba | -0.8421\* | 0.0320\* | 0.0223\* | 0.0016\* | 0.6118 | -0.036 | 3.00 | 0.8724 |
| Marabá | -0.7876\* | 0.0322\* | 0.0167\* | 0.0012\* | 0.5709 | -0.031 | 2.58 | 0.8487 |
| Monte Alegre | -0.3756\* | 0.0295\* | 0.0200\* | -0.0020\* | 0.5146 | -0.117 | 3.06 | 0.8173 |
| Óbidos | 0.3515ns | 0.0043ns | 0.0229\* | -0.0035\* | 0.5756 | - | - | - |
| Soure | -0.1770ns | 0.0460\* | 0.0074\* | -0.0096\* | 0.5772 | - | - | - |
| Tucuruí | 0.2297\* | 0.0124\* | 0.0149\* | -0.0035\* | 0.3793 | -0.161 | 2.75 | 0.7676 |
| Boa Vista | -0.2830\* | 0.0173\* | 0.0261\* | -0.0003ns | 0.6081 | - | - | - |

Table 77. Coefficients of the model 70 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0299\* | 22.58\* | -22.57\* | -22.54\* | -0.0013\* | 0.5689 | -0.070 | 3.03 | 0.8670 |
| Macapá | -0.3428\* | -32.06ns | 32.10ns | 32.12ns | -0.0060\* | 0.7351 | - | - | - |
| Barcelos | 0.3275\* | 2.90ns | -2.89ns | -2.87ns | -0.0068\* | 0.654 | - | - | - |
| Eirunepé | -0.1219\* | -20.47\* | 20.48\* | 20.51\* | -0.0006\* | 0.6346 | -0.053 | 2.54 | 0.8867 |
| Itacoatiara | -0.6016\* | -22.08\* | 22.11\* | 22.13\* | -0.0016\* | 0.6521 | -0.006 | 3.13 | 0.8815 |
| Lábrea | 0.3212\* | 32.61ns | -32.59ns | -32.58ns | -0.0063\* | 0.5709 | - | - | - |
| Manaus | -0.2167\* | 21.03\* | -21.01\* | -20.99\* | -0.0025\* | 0.5136 | 0.049 | 3.46 | 0.8404 |
| Parintins | -0.6367\* | 19.73\* | -19.69\* | -19.67\* | -0.0030\* | 0.6788 | 0.202 | 3.12 | 0.8949 |
| S. G. da Cachoeira | -0.4500\* | -56.73ns | 56.75ns | 56.78ns | 0.0008\* | 0.7905 | - | - | - |
| Sinop | -0.1996\* | 21.23ns | -21.23ns | -21.20ns | 0.0020\* | 0.3238 | - | - | - |
| Belém | 0.3084\* | 21.54\* | -21.53\* | -21.51\* | -0.0062\* | 0.4382 | -0.066 | 2.71 | 0.7938 |
| Cametá | -0.7784\* | 61.93\* | -61.89\* | -61.88\* | -0.0031\* | 0.5593 | -0.122 | 2.53 | 0.8401 |
| Conceição do Araguaia | -0.2704\* | 0.0348ns | -0.0184ns | -0.0002ns | 0.0004ns | 0.4982 | - | - | - |
| Itaituba | -0.8421\* | 20.73ns | -20.70ns | -20.68ns | 0.0016\* | 0.6118 | - | - | - |
| Marabá | -0.7876\* | -24.15\* | 24.19\* | 24.20\* | 0.0012\* | 0.5709 | -0.031 | 2.58 | 0.8487 |
| Monte Alegre | -0.3756\* | -31.13\* | 31.16\* | 31.18\* | -0.0020\* | 0.5146 | -0.117 | 3.06 | 0.8173 |
| Óbidos | 0.3515\* | -23.98\* | 23.98\* | 24.00\* | -0.0035\* | 0.5756 | -0.022 | 2.80 | 0.8733 |
| Soure | -0.1770ns | -32.30ns | 32.35ns | 32.35ns | -0.0096\* | 0.5772 | - | - | - |
| Tucuruí | 0.2297\* | 33.17ns | -33.15ns | -33.14ns | -0.0035\* | 0.3793 | - | - | - |
| Boa Vista | -0.2830\* | 28.52\* | -28.51\* | -28.48\* | -0.0003\* | 0.6081 | 0.065 | 2.78 | 0.8731 |

Table 78. Coefficients of the model 71 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0565\* | 0.0839\* | 0.3547\* | 0.7939 | 0.035 | 2.21 | 0.9382 |
| Macapá | 0.0162ns | 0.1037\* | 0.4254\* | 0.9015 | - | - | - |
| Barcelos | 0.0443\* | 0.0957\* | 0.3631\* | 0.8025 | 0.010 | 2.34 | 0.9434 |
| Eirunepé | -0.0025ns | 0.1114\* | 0.2982\* | 0.7764 | - | - | - |
| Itacoatiara | 0.0438\* | 0.0827\* | 0.3735\* | 0.8271 | 0.033 | 2.15 | 0.9495 |
| Lábrea | 0.1813\* | 0.0516\* | 0.3182\* | 0.7582 | 0.117 | 2.01 | 0.9103 |
| Manaus | 0.0513\* | 0.0780\* | 0.4045\* | 0.7937 | 0.091 | 2.21 | 0.9460 |
| Parintins | 0.0573\* | 0.0808\* | 0.4265\* | 0.8872 | 0.049 | 1.87 | 0.9659 |
| S. G. da Cachoeira | -0.0974\* | 0.1479\* | 0.2535\* | 0.8667 | -0.034 | 1.85 | 0.9590 |
| Sinop | 0.2253\* | 0.0402\* | 0.3495\* | 0.6516 | 0.089 | 2.54 | 0.8812 |
| Belém | 0.1054\* | 0.0438\* | 0.3357\* | 0.6627 | -0.086 | 2.13 | 0.8914 |
| Cametá | 0.1223\* | 0.0615\* | 0.4183\* | 0.8453 | -0.006 | 1.54 | 0.9510 |
| Conceição do Araguaia | 0.2011\* | 0.0242\* | 0.4170\* | 0.8072 | -0.051 | 1.96 | 0.9441 |
| Itaituba | 0.1207\* | 0.0675\* | 0.3915\* | 0.8729 | 0.092 | 1.65 | 0.9673 |
| Marabá | 0.1543\* | 0.0565\* | 0.3431\* | 0.8017 | -0.061 | 1.76 | 0.9387 |
| Monte Alegre | 0.1601\* | 0.0484\* | 0.4415\* | 0.8955 | 0.010 | 1.29 | 0.9745 |
| Óbidos | 0.0834\* | 0.0581\* | 0.3418\* | 0.8003 | -0.046 | 1.95 | 0.9456 |
| Soure | 0.2037\* | 0.0542\* | 0.3822\* | 0.8296 | -0.128 | 1.81 | 0.9496 |
| Tucuruí | 0.1296\* | 0.0628\* | 0.3153\* | 0.7094 | -0.081 | 1.91 | 0.9060 |
| Boa Vista | 0.1524\* | 0.0576\* | 0.3785\* | 0.8438 | 0.038 | 1.74 | 0.9565 |

Table 79. Coefficients of the model 72 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.1010\* | -0.0096\* | 0.0132\* | 0.3674\* | 0.7866 | 0.030 | 2.27 | 0.9351 |
| Macapá | -0.1949\* | -0.0080\* | 0.0221\* | 0.4045\* | 0.9026 | 0.064 | 1.59 | 0.9758 |
| Barcelos | -0.1648\* | -0.0029\* | 0.0176\* | 0.3645\* | 0.8009 | 0.014 | 2.31 | 0.9446 |
| Eirunepé | -0.0947\* | -0.0077\* | 0.0188\* | 0.3163\* | 0.7753 | 0.047 | 1.89 | 0.9412 |
| Itacoatiara | -0.0653ns | -0.0069\* | 0.0161\* | 0.3611\* | 0.8261 | - | - | - |
| Lábrea | 0.0050ns | -0.0007ns | 0.0108\* | 0.3182\* | 0.7644 | - | - | - |
| Manaus | 0.0517\* | -0.0092\* | 0.0137\* | 0.4013\* | 0.7913 | 0.086 | 2.21 | 0.9457 |
| Parintins | -0.1024\* | -0.0058\* | 0.0167\* | 0.4055\* | 0.8877 | 0.044 | 1.87 | 0.9664 |
| S. G. da Cachoeira | 0.0868\* | -0.0274\* | 0.0277\* | 0.2519\* | 0.8570 | -0.044 | 1.91 | 0.9560 |
| Sinop | 0.2009\* | -0.0018ns | 0.0059\* | 0.3654\* | 0.6457 | - | - | - |
| Belém | 0.0281ns | -0.0025ns | 0.0083\* | 0.3331\* | 0.6628 | - | - | - |
| Cametá | -0.0516ns | -0.0061\* | 0.0159\* | 0.3916\* | 0.8480 | - | - | - |
| Conceição do Araguaia | 0.2804\* | -0.0022\* | 0.0011ns | 0.4420\* | 0.8044 | - | - | - |
| Itaituba | 0.0007ns | -0.0017ns | 0.0109\* | 0.3950\* | 0.8711 | - | - | - |
| Marabá | -0.0562\* | -0.0006ns | 0.0125\* | 0.3385\* | 0.8056 | - | - | - |
| Monte Alegre | 0.3236\* | -0.0101\* | 0.0064\* | 0.4586\* | 0.8944 | 0.014 | 1.30 | 0.9743 |
| Óbidos | -0.0620ns | 0.0017ns | 0.0087\* | 0.3488\* | 0.8009 | - | - | - |
| Soure | -0.0760ns | -0.0087\* | 0.0209\* | 0.3516\* | 0.8331 | - | - | - |
| Tucuruí | 0.0393ns | -0.0050\* | 0.0124\* | 0.3056\* | 0.7131 | - | - | - |
| Boa Vista | 0.0799\* | -0.0021ns | 0.0090\* | 0.3767\* | 0.8449 | - | - | - |

Table 80. Coefficients of the model 73 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | 0.0856\* | 0.0135\* | -0.0100\* | 0.0002ns | 0.3691\* | 0.7868 | - | - | - |
| Macapá | -0.0275ns | 0.0197\* | -0.0085\* | -0.0010\* | 0.3988\* | 0.9031 | - | - | - |
| Barcelos | 0.1574\* | 0.0151\* | -0.0043\* | -0.0024\* | 0.3427\* | 0.8063 | 0.017 | 2.26 | 0.9472 |
| Eirunepé | -0.0289ns | 0.0180\* | -0.0074\* | -0.0007\* | 0.3186\* | 0.7824 | - | - | - |
| Itacoatiara | -0.3968\* | 0.0195\* | -0.0044\* | 0.0020\* | 0.3695\* | 0.8283 | 0.034 | 2.17 | 0.9488 |
| Lábrea | 0.2501\* | 0.0072\* | 0.0028ns | -0.0025\* | 0.3039\* | 0.7707 | - | - | - |
| Manaus | -0.0951\* | 0.0153\* | -0.0077\* | 0.0008\* | 0.4061\* | 0.7920 | 0.083 | 2.20 | 0.9463 |
| Parintins | -0.0343ns | 0.0160\* | -0.0063\* | -0.0004ns | 0.4045\* | 0.8878 | - | - | - |
| S. G. da Cachoeira | -0.2258\* | 0.0295\* | -0.0229\* | 0.0018\* | 0.2669\* | 0.8646 | -0.040 | 1.87 | 0.9583 |
| Sinop | 0.0163ns | 0.0114\* | -0.0066\* | 0.0014\* | 0.3619\* | 0.6537 | - | - | - |
| Belém | 0.4614\* | 0.0036\* | -0.0040\* | -0.0029\* | 0.3092\* | 0.6798 | -0.085 | 2.07 | 0.8995 |
| Cametá | -0.1660\* | 0.0170\* | -0.0049\* | 0.0006\* | 0.3957\* | 0.8485 | -0.001 | 1.54 | 0.9517 |
| Conceição do Araguaia | 0.0581ns | 0.0053\* | -0.0033\* | 0.0014\* | 0.4492\* | 0.8112 | - | - | - |
| Itaituba | -0.2340\* | 0.0143\* | -0.0010ns | 0.0014\* | 0.3945\* | 0.8739 | - | - | - |
| Marabá | -0.2266\* | 0.0157\* | -0.0014ns | 0.0011\* | 0.3380\* | 0.8078 | - | - | - |
| Monte Alegre | -0.0312ns | 0.0116\* | -0.0080\* | 0.0018\* | 0.4645\* | 0.8967 | - | - | - |
| Óbidos | 0.2211ns | 0.0045\* | 0.0003ns | -0.0014\* | 0.3448\* | 0.8027 | - | - | - |
| Soure | -0.3188\* | 0.0225\* | -0.0060\* | 0.0015\* | 0.3638\* | 0.8342 | -0.139 | 1.77 | 0.9520 |
| Tucuruí | 0.0556ns | 0.0122\* | -0.0051\* | -0.0001ns | 0.3050\* | 0.7131 | - | - | - |
| Boa Vista | 0.0505ns | 0.0094\* | -0.0017ns | 0.0001ns | 0.3769\* | 0.8449 | - | - | - |

Table 81. Coefficients of the model 74 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | -0.0888\* | 0.2152\* | -0.0012\* | 0.5920 | -0.048 | 2.93 | 0.8764 |
| Macapá | 0.6321\* | 0.2442\* | -0.0099\* | 0.7208 | 0.040 | 2.74 | 0.9213 |
| Barcelos | 0.5156\* | 0.1981\* | -0.0076\* | 0.6712 | 0.016 | 2.96 | 0.9035 |
| Eirunepé | -0.2404\* | 0.2353\* | -0.0006\* | 0.6451 | -0.048 | 2.50 | 0.8916 |
| Itacoatiara | 0.3539\* | 0.2177\* | -0.0063\* | 0.6415 | -0.009 | 3.16 | 0.8773 |
| Lábrea | 0.5188\* | 0.1357\* | -0.0059\* | 0.5606 | 0.110 | 2.64 | 0.8273 |
| Manaus | 0.1628\* | 0.2270\* | -0.0046\* | 0.5147 | 0.068 | 3.51 | 0.8355 |
| Parintins | 0.6228\* | 0.2249\* | -0.0090\* | 0.6626 | 0.199 | 3.14 | 0.8927 |
| S. G. da Cachoeira | -0.2043\* | 0.2424\* | -0.0007\* | 0.7826 | -0.044 | 2.40 | 0.9264 |
| Sinop | -0.3085\* | 0.2049\* | 0.0020\* | 0.3723 | 0.067 | 3.39 | 0.7601 |
| Belém | 0.4286\* | 0.1717\* | -0.0067\* | 0.4397 | -0.057 | 2.72 | 0.7931 |
| Cametá | 0.5617\* | 0.2131\* | -0.0082\* | 0.5025 | -0.170 | 2.67 | 0.8129 |
| Conceição do Araguaia | -0.0591\* | 0.1835\* | -0.0006\* | 0.5272 | 0.068 | 3.08 | 0.8305 |
| Itaituba | -0.1900\* | 0.2701\* | -0.0011\* | 0.6005 | -0.001 | 3.05 | 0.8646 |
| Marabá | -0.0603ns | 0.2130\* | -0.0012\* | 0.5462 | - | - | - |
| Monte Alegre | 0.4891\* | 0.1984\* | -0.0064\* | 0.5129 | -0.096 | 3.03 | 0.8194 |
| Óbidos | 0.1646\* | 0.1752\* | -0.0034\* | 0.598 | -0.018 | 2.74 | 0.8811 |
| Soure | 1.53\* | 0.1138\* | -0.0163\* | 0.5346 | -0.049 | 2.86 | 0.8435 |
| Tucuruí | 0.4534\* | 0.1334\* | -0.0046\* | 0.3790 | -0.166 | 2.73 | 0.7715 |
| Boa Vista | -0.1065\* | 0.2432\* | -0.0017\* | 0.6108 | 0.046 | 2.75 | 0.8770 |

Table 82. Coefficients of the model 75 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 3.69\* | -0.0267\* | 0.0344\* | -0.0016\* | 0.5772 | -0.009 | 3.00 | 0.8642 |
| Macapá | 16.60\* | -0.0269\* | 0.0461\* | -0.0095\* | 0.7488 | 0.090 | 2.52 | 0.9327 |
| Barcelos | 16.98\* | -0.0214\* | 0.0353\* | -0.0076\* | 0.6752 | 0.059 | 2.91 | 0.9040 |
| Eirunepé | 3.10\* | -0.0365\* | 0.0386\* | -0.0009\* | 0.6368 | -0.004 | 2.52 | 0.8839 |
| Itacoatiara | 14.62\* | -0.0303\* | 0.0403\* | -0.0063\* | 0.6735 | 0.038 | 3.02 | 0.8860 |
| Lábrea | 6.05\* | -0.0031ns | 0.0260\* | -0.0059\* | 0.5809 | - | - | - |
| Manaus | 15.00\* | -0.0346\* | 0.0388\* | -0.0049\* | 0.5491 | 0.128 | 3.36 | 0.8425 |
| Parintins | 19.73\* | -0.0283\* | 0.0428\* | -0.0088\* | 0.7078 | 0.233 | 2.98 | 0.9018 |
| S. G. da Cachoeira | 2.26\* | -0.0434\* | 0.0458\* | -0.0009\* | 0.7824 | -0.051 | 3.87 | 0.9271 |
| Sinop | 4.36\* | -0.0188\* | 0.0234\* | 0.0005ns | 0.3310 | - | - | - |
| Belém | 18.74\* | -0.0241\* | 0.0298\* | -0.0065\* | 0.4985 | -0.022 | 2.58 | 0.8083 |
| Cametá | 8.12\* | -0.0226\* | 0.0425\* | -0.0067\* | 0.5564 | -0.115 | 2.53 | 0.8306 |
| Conceição do Araguaia | 4.64\* | -0.0179\* | 0.0258\* | -0.0012\* | 0.5014 | 0.100 | 3.12 | 0.8158 |
| Itaituba | 5.20\* | -0.0344\* | 0.0423\* | -0.0025\* | 0.5934 | 0.030 | 3.08 | 0.8558 |
| Marabá | 6.50\* | -0.0185\* | 0.0300\* | -0.0029\* | 0.5534 | -0.011 | 2.66 | 0.8231 |
| Monte Alegre | 23.18\* | -0.0312\* | 0.0367\* | -0.0066\* | 0.5879 | -0.040 | 2.81 | 0.8409 |
| Óbidos | 15.11\* | -0.0196\* | 0.0253\* | -0.0045\* | 0.6169 | 0.027 | 2.65 | 0.8831 |
| Soure | 11.97\* | -0.0093\* | 0.0429\* | -0.0113\* | 0.5887 | -0.057 | 2.67 | 0.8668 |
| Tucuruí | 13.37\* | -0.0197\* | 0.0270\* | -0.0037\* | 0.4328 | -0.118 | 2.63 | 0.7749 |
| Boa Vista | 22.95\* | -0.0441\* | 0.0376\* | -0.0046\* | 0.6632 | 0.075 | 2.53 | 0.8917 |

Table 83. Coefficients of the model 76 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 4.91\* | -0.0309\* | 0.0350\* | -0.0400\* | 0.5689 | -0.009 | 3.03 | 0.8601 |
| Macapá | 40.00\* | -0.0417\* | 0.0409\* | -0.4039\* | 0.7246 | 0.071 | 2.67 | 0.9230 |
| Barcelos | 30.27\* | -0.0289\* | 0.0311\* | -0.3003\* | 0.6532 | 0.072 | 3.04 | 0.8929 |
| Eirunepé | 3.85\* | -0.0378\* | 0.0385\* | -0.0247\* | 0.6317 | -0.004 | 2.53 | 0.8825 |
| Itacoatiara | 31.56\* | -0.0412\* | 0.0370\* | -0.2743\* | 0.6458 | 0.036 | 3.13 | 0.8739 |
| Lábrea | 19.25\* | -0.0113\* | 0.0217\* | -0.2329\* | 0.5564 | 0.100 | 2.62 | 0.8298 |
| Manaus | 25.68\* | -0.0413\* | 0.0363\* | -0.2021\* | 0.5256 | 0.138 | 3.47 | 0.8285 |
| Parintins | 46.98\* | -0.0418\* | 0.0360\* | -0.4126\* | 0.673 | 0.224 | 3.11 | 0.8914 |
| S. G. da Cachoeira | 0.56ns | -0.0435\* | 0.0459\* | -0.0123ns | 0.7798 | - | - | - |
| Sinop | 1.00ns | -0.0218\* | 0.0264\* | 0.0491\* | 0.338 | - | - | - |
| Belém | 34.83\* | -0.0350\* | 0.0258\* | -0.2602\* | 0.4793 | -0.013 | 2.63 | 0.7986 |
| Cametá | 25.52\* | -0.0297\* | 0.0357\* | -0.2858\* | 0.5171 | -0.131 | 2.63 | 0.8095 |
| Conceição do Araguaia | 4.53\* | -0.0210\* | 0.0267\* | -0.0216\* | 0.4943 | 0.100 | 3.16 | 0.8092 |
| Itaituba | 5.84\* | -0.0410\* | 0.0443\* | -0.0524\* | 0.5799 | 0.036 | 3.15 | 0.8468 |
| Marabá | 7.13\* | -0.0262\* | 0.0317\* | -0.0579\* | 0.5272 | -0.021 | 2.71 | 0.8113 |
| Monte Alegre | 41.37\* | -0.0373\* | 0.0297\* | -0.3048\* | 0.5603 | -0.032 | 2.88 | 0.8282 |
| Óbidos | 32.31\* | -0.0257\* | 0.0194\* | -0.2266\* | 0.6173 | 0.007 | 2.64 | 0.8833 |
| Soure | 46.33\* | -0.0168\* | 0.0263\* | -0.5257\* | 0.5548 | -0.035 | 2.79 | 0.8493 |
| Tucuruí | 23.34\* | -0.0243\* | 0.0236\* | -0.1622\* | 0.4222 | -0.120 | 2.64 | 0.7705 |
| Boa Vista | 27.32\* | -0.0474\* | 0.0357\* | -0.1552\* | 0.6396 | 0.082 | 2.61 | 0.8824 |

Table 84. Coefficients of the model 77 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 1.19ns | 0.1945\* | -0.0019\* | 0.5910 | - | - | - |
| Macapá | 22.61\* | 0.2437\* | -0.0098\* | 0.7379 | 0.068 | 2.58 | 0.9286 |
| Barcelos | 18.45\* | 0.2020\* | -0.0077\* | 0.6895 | 0.038 | 2.88 | 0.9082 |
| Eirunepé | -3.97\* | 0.2060\* | -0.0012\* | 0.6096 | 0.005 | 2.62 | 0.8710 |
| Itacoatiara | 16.04\* | 0.2093\* | -0.0071\* | 0.6774 | 0.043 | 2.99 | 0.8886 |
| Lábrea | 2.89\* | 0.1803\* | -0.0021\* | 0.5427 | 0.150 | 2.76 | 0.8005 |
| Manaus | 12.39\* | 0.1940\* | -0.0057\* | 0.5496 | 0.122 | 3.37 | 0.8423 |
| Parintins | 24.30\* | 0.2250\* | -0.0096\* | 0.7087 | 0.254 | 2.99 | 0.9006 |
| S. G. da Cachoeira | -3.83\* | 0.2303\* | -0.0015\* | 0.7738 | -0.024 | 2.42 | 0.9237 |
| Sinop | 2.29\* | 0.1405\* | -0.0001ns | 0.3581 | - | - | - |
| Belém | 17.60\* | 0.1582\* | -0.0069\* | 0.4972 | -0.020 | 2.59 | 0.8073 |
| Cametá | 16.62\* | 0.2269\* | -0.0074\* | 0.5167 | -0.148 | 2.62 | 0.8106 |
| Conceição do Araguaia | 3.37\* | 0.1571\* | -0.0015\* | 0.5312 | 0.106 | 3.05 | 0.8268 |
| Itaituba | 4.27\* | 0.2249\* | -0.0035\* | 0.5999 | 0.031 | 3.05 | 0.8596 |
| Marabá | 6.68\* | 0.1724\* | -0.0028\* | 0.5596 | -0.018 | 2.64 | 0.8259 |
| Monte Alegre | 22.31\* | 0.1837\* | -0.0075\* | 0.5963 | -0.034 | 2.78 | 0.8452 |
| Óbidos | 13.77\* | 0.1482\* | -0.0050\* | 0.6352 | 0.022 | 2.59 | 0.8903 |
| Soure | 48.29\* | 0.0927\* | -0.0131\* | 0.4449 | -0.034 | 3.10 | 0.7920 |
| Tucuruí | 13.97\* | 0.1443\* | -0.0042\* | 0.4312 | -0.126 | 2.62 | 0.7785 |
| Boa Vista | 9.06\* | 0.1824\* | -0.0041\* | 0.6268 | 0.098 | 2.68 | 0.8752 |

Table 85. Coefficients of the model 78 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 2.50\* | 0.1842\* | -0.0726\* | 0.5690 | 0.009 | 3.04 | 0.8596 |
| Macapá | 34.09\* | 0.1878\* | -0.4314\* | 0.7152 | 0.066 | 2.74 | 0.9187 |
| Barcelos | 23.13\* | 0.1784\* | -0.3016\* | 0.6644 | 0.053 | 2.98 | 0.8992 |
| Eirunepé | -5.18\* | 0.2044\* | -0.0230\* | 0.5923 | 0.007 | 2.69 | 0.8634 |
| Itacoatiara | 23.47\* | 0.1673\* | -0.2979\* | 0.6290 | 0.038 | 3.24 | 0.8645 |
| Lábrea | 15.39\* | 0.1430\* | -0.1817\* | 0.5517 | 0.117 | 2.68 | 0.8184 |
| Manaus | 15.94\* | 0.1631\* | -0.2108\* | 0.4985 | 0.118 | 3.55 | 0.8167 |
| Parintins | 34.46\* | 0.1645\* | -0.3997\* | 0.6593 | 0.219 | 3.11 | 0.8905 |
| S. G. da Cachoeira | -5.98\* | 0.2300\* | -0.0279\* | 0.7671 | -0.011 | 2.47 | 0.9199 |
| Sinop | 0.4977ns | 0.1476\* | 0.0083ns | 0.3584 | - | - | - |
| Belém | 26.16\* | 0.1108\* | -0.2940\* | 0.4428 | -0.026 | 2.70 | 0.7803 |
| Cametá | 26.13\* | 0.1684\* | -0.3135\* | 0.5034 | -0.130 | 2.67 | 0.8014 |
| Conceição do Araguaia | 3.46\* | 0.1559\* | -0.0519\* | 0.5167 | 0.107 | 3.11 | 0.8172 |
| Itaituba | 2.63\* | 0.2205\* | -0.0967\* | 0.5662 | 0.033 | 3.21 | 0.8389 |
| Marabá | 7.54\* | 0.1666\* | -0.1019\* | 0.5205 | -0.020 | 2.74 | 0.8073 |
| Monte Alegre | 29.19\* | 0.1301\* | -0.2934\* | 0.5386 | -0.028 | 2.97 | 0.8132 |
| Óbidos | 24.52\* | 0.0958\* | -0.2422\* | 0.6051 | 0.004 | 2.68 | 0.8794 |
| Soure | 56.13\* | 0.0942\* | -0.5751\* | 0.5456 | -0.025 | 2.81 | 0.8448 |
| Tucuruí | 20.24\* | 0.1078\* | -0.1826\* | 0.4107 | -0.119 | 2.66 | 0.7651 |
| Boa Vista | 5.27\* | 0.1818\* | -0.0921\* | 0.5862 | 0.116 | 2.82 | 0.8564 |

Table 86. Coefficients of the model 79 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.4869\* | -16.63\* | 0.2962\* | 14.81\* | 0.7639 | 0.049 | 2.41 | 0.9254 |
| Macapá | 0.2645\* | -23.51\* | 0.8020\* | 14.42\* | 0.9042 | 0.084 | 1.58 | 0.9760 |
| Barcelos | 0.2712\* | -19.49\* | 0.6804\* | 12.85\* | 0.802 | 0.020 | 2.30 | 0.9451 |
| Eirunepé | 0.2876\* | -18.47\* | 0.6280\* | 11.75\* | 0.7681 | 0.088 | 1.94 | 0.9358 |
| Itacoatiara | 0.3697\* | -21.85\* | 0.5893\* | 12.62\* | 0.8225 | 0.043 | 2.22 | 0.9457 |
| Lábrea | 0.5862\* | -19.45\* | 0.3143\* | 12.21\* | 0.7509 | 0.077 | 2.01 | 0.9148 |
| Manaus | 0.2186\* | -13.01\* | 0.4700\* | 13.77\* | 0.7947 | 0.094 | 2.18 | 0.9466 |
| Parintins | 0.5248\* | -26.78\* | 0.5758\* | 14.48\* | 0.8836 | 0.023 | 1.88 | 0.9658 |
| S. G. da Cachoeira | 0.1797\* | -21.89\* | 0.8388\* | 11.03\* | 0.8024 | -0.027 | 2.13 | 0.9442 |
| Sinop | 0.5760\* | -15.64\* | 0.2234\* | 13.56\* | 0.6346 | 0.066 | 2.60 | 0.8760 |
| Belém | 0.2069\* | -11.23\* | 0.3884\* | 11.37\* | 0.6719 | -0.080 | 2.10 | 0.8929 |
| Cametá | 0.5236\* | -24.98\* | 0.5388\* | 14.00\* | 0.8443 | 0.010 | 1.57 | 0.9491 |
| Conceição do Araguaia | 0.6571\* | -15.41\* | 0.0152ns | 17.10\* | 0.7974 | - | - | - |
| Itaituba | 0.5180\* | -20.51\* | 0.4046\* | 14.21\* | 0.8678 | 0.094 | 1.70 | 0.9649 |
| Marabá | 0.4785\* | -21.18\* | 0.4956\* | 11.80\* | 0.8003 | -0.044 | 1.77 | 0.9379 |
| Monte Alegre | 0.4613\* | -11.96\* | 0.1804\* | 16.25\* | 0.8914 | 0.024 | 1.33 | 0.9724 |
| Óbidos | 0.3778\* | -16.85\* | 0.3942\* | 12.10\* | 0.8017 | -0.041 | 1.93 | 0.9460 |
| Soure | 0.4611\* | -23.29\* | 0.6348\* | 11.92\* | 0.8266 | -0.120 | 1.81 | 0.9490 |
| Tucuruí | 0.5746\* | -21.98\* | 0.3893\* | 11.44\* | 0.7115 | -0.080 | 1.91 | 0.9069 |
| Boa Vista | 0.0396ns | -9.69\* | 0.6279\* | 12.20\* | 0.8701 | - | - | - |

Table 87. Coefficients of the model 80 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.5827\* | -9.48\* | -0.0272\* | 16.51\* | 0.7508 | 0.082 | 2.47 | 0.9208 |
| Macapá | 0.2259\* | 14.29\* | -0.1518\* | 15.63\* | 0.8961 | 0.068 | 1.68 | 0.9730 |
| Barcelos | 0.4547\* | 7.40\* | -0.1495\* | 14.98\* | 0.7826 | 0.043 | 2.40 | 0.9383 |
| Eirunepé | 0.4293\* | -2.80\* | -0.0343\* | 16.04\* | 0.7196 | 0.136 | 2.16 | 0.9186 |
| Itacoatiara | 0.4920\* | -5.86\* | -0.0427\* | 15.86\* | 0.8033 | 0.036 | 2.30 | 0.9408 |
| Lábrea | 0.6354\* | -2.07ns | -0.1134\* | 12.41\* | 0.7515 | - | - | - |
| Manaus | 0.3063\* | 0.5707ns | -0.0330\* | 15.87\* | 0.7775 | - | - | - |
| Parintins | 0.5833\* | -4.36\* | -0.0923\* | 16.36\* | 0.8738 | -0.027 | 1.95 | 0.9635 |
| S. G. da Cachoeira | 0.5139\* | -16.15\* | 0.0691\* | 18.19\* | 0.7633 | 0.085 | 2.35 | 0.9287 |
| Sinop | 0.6000\* | -9.28\* | -0.0097ns | 14.94\* | 0.6219 | - | - | - |
| Belém | 0.2372\* | 10.15\* | -0.1233\* | 11.20\* | 0.6869 | -0.077 | 2.05 | 0.9005 |
| Cametá | 0.5443\* | -8.37\* | -0.0151\* | 16.01\* | 0.8304 | 0.018 | 1.63 | 0.9446 |
| Conceição do Araguaia | 0.6645\* | -18.15\* | 0.0326\* | 18.26\* | 0.8015 | -0.095 | 1.99 | 0.9430 |
| Itaituba | 0.5687\* | -9.11\* | -0.0166\* | 16.59\* | 0.8537 | 0.113 | 1.77 | 0.9613 |
| Marabá | 0.5163\* | -5.41\* | -0.0321\* | 14.27\* | 0.7778 | -0.071 | 1.83 | 0.9324 |
| Monte Alegre | 0.5295\* | -10.54\* | 0.0135ns | 17.58\* | 0.8897 | - | - | - |
| Óbidos | 0.3496\* | 5.71\* | -0.1100\* | 12.27\* | 0.8028 | -0.069 | 1.91 | 0.9474 |
| Soure | 0.4835\* | -7.88\* | 0.0301\* | 13.86\* | 0.8175 | -0.116 | 1.90 | 0.9433 |
| Tucuruí | 0.6647\* | -9.86\* | -0.0465\* | 12.45\* | 0.6976 | -0.075 | 1.96 | 0.9012 |
| Boa Vista | 0.1862\* | 9.43\* | -0.0686\* | 14.71\* | 0.8533 | 0.055 | 1.70 | 0.9580 |

Table 88. Coefficients of the model 81 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | Statistical indices | | |
| a | b | c | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2617\* | -0.0024ns | 0.4674\* | 0.7570 | - | - | - |
| Macapá | 0.2555\* | -0.0050\* | 0.5095\* | 0.8845 | 0.0515 | 1.79 | 0.9688 |
| Barcelos | 0.2881\* | 0.0013ns | 0.4773\* | 0.7657 | - | - | - |
| Eirunepé | 0.2845\* | -0.0008ns | 0.4523\* | 0.7143 | - | - | - |
| Itacoatiara | 0.2279\* | 1.28E-05ns | 0.4582\* | 0.8062 | - | - | - |
| Lábrea | 0.3164\* | -0.0005ns | 0.3817\* | 0.7420 | - | - | - |
| Manaus | 0.2415\* | -0.0032\* | 0.4671\* | 0.7752 | 0.0893 | 2.30 | 0.9402 |
| Parintins | 0.2349\* | 0.0014ns | 0.4947\* | 0.8711 | - | - | - |
| S. G. da Cachoeira | 0.2336\* | -4.84E-05ns | 0.4756\* | 0.7527 | - | - | - |
| Sinop | 0.3313\* | -0.0033ns | 0.4125\* | 0.6336 | - | - | - |
| Belém | 0.2203\* | -0.0005ns | 0.3670\* | 0.6563 | - | - | - |
| Cametá | 0.2787\* | 0.0006ns | 0.4494\* | 0.8332 | - | - | - |
| Conceição do Araguaia | 0.2586\* | 0.0054\* | 0.4592\* | 0.8042 | -0.0705 | 1.96 | 0.9443 |
| Itaituba | 0.2822\* | 0.0027\* | 0.4633\* | 0.8575 | 0.1035 | 1.73 | 0.9634 |
| Marabá | 0.2923\* | 0.0006ns | 0.4136\* | 0.7843 | - | - | - |
| Monte Alegre | 0.2732\* | -0.0024ns | 0.4750\* | 0.8888 | - | - | - |
| Óbidos | 0.2313\* | 0.0070\* | 0.4091\* | 0.7881 | -0.0666 | 2.02 | 0.9404 |
| Soure | 0.3377\* | -0.0026ns | 0.3708\* | 0.8178 | - | - | - |
| Tucuruí | 0.2877\* | -4.73E-05ns | 0.3542\* | 0.6856 | - | - | - |
| Boa Vista | 0.3020\* | -0.0040\* | 0.4347\* | 0.8345 | 0.0535 | 1.82 | 0.9515 |

Table 89. Coefficients of the model 82 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | -47.20ns | 0.3607\* | 0.8031\* | 47.23ns | 0.0024ns | 0.8051 | - | - | - |
| Macapá | -20.25ns | 0.4517\* | 0.8100\* | 20.29ns | 0.0055ns | 0.9071 | - | - | - |
| Barcelos | -59.55ns | 0.3832\* | 0.6433\* | 59.59ns | 0.0019ns | 0.8262 | - | - | - |
| Eirunepé | -63.81ns | 0.3097\* | 0.6805\* | 63.81ns | 0.0021ns | 0.7979 | - | - | - |
| Itacoatiara | -14.79ns | 0.3885\* | 0.7409\* | 14.84ns | 0.0062ns | 0.8375 | - | - | - |
| Lábrea | -27.43ns | 0.3179\* | 0.6829\* | 27.56ns | 0.0029ns | 0.7776 | - | - | - |
| Manaus | -23.47ns | 0.4095\* | 0.8463\* | 23.52ns | 0.0041ns | 0.7992 | - | - | - |
| Parintins | -15.57ns | 0.4663\* | 0.7122\* | 15.65ns | 0.0046ns | 0.9003 | - | - | - |
| S. G. da Cachoeira | -0.3948\* | 0.2620\* | 0.9004\* | 0.4021\* | 0.2717\* | 0.8687 | -0.029 | 1.84 | 0.9599 |
| Sinop | -55.42ns | 0.3389\* | 0.8232\* | 55.58ns | 0.0015ns | 0.6650 | - | - | - |
| Belém | -12.17ns | 0.3204\* | 1.2468\* | 12.25ns | 0.0068ns | 0.6658 | - | - | - |
| Cametá | -10.04ns | 0.4476\* | 0.7840\* | 10.16ns | 0.0067ns | 0.852 | - | - | - |
| Conceição do Araguaia | -14.53ns | 0.4450\* | 0.6996\* | 14.67ns | 0.0028ns | 0.8263 | - | - | - |
| Itaituba | -39.85ns | 0.4295\* | 0.6682\* | 39.95ns | 0.0018ns | 0.8954 | - | - | - |
| Marabá | -1.60ns | 0.3620\* | 0.6772\* | 1.71ns | 0.0448ns | 0.8252 | - | - | - |
| Monte Alegre | -11.68ns | 0.4824\* | 0.7232\* | 11.81ns | 0.0042ns | 0.9068 | - | - | - |
| Óbidos | -24.89ns | 0.3484\* | 0.8359\* | 24.94ns | 0.0035ns | 0.8065 | - | - | - |
| Soure | -4.10ns | 0.4053\* | 0.6424\* | 4.31ns | 0.0102ns | 0.8476 | - | - | - |
| Tucuruí | -2.34ns | 0.3205\* | 0.9048\* | 2.46ns | 0.0318ns | 0.7107 | - | - | - |
| Boa Vista | -14.44ns | 0.4037\* | 0.7675\* | 14.56ns | 0.0052ns | 0.8503 | - | - | - |

Table 90. Coefficients of the model 83 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 0.2133\* | -0.0035\* | 0.5508 | 0.111 | 3.12 | 0.8353 |
| Macapá | 0.5170\* | -0.0081\* | 0.6972 | 0.089 | 2.83 | 0.9105 |
| Barcelos | 0.3869\* | -0.0071\* | 0.6353 | 0.141 | 3.12 | 0.8791 |
| Eirunepé | 0.1648\* | -0.0018\* | 0.5419 | 0.182 | 2.88 | 0.7975 |
| Itacoatiara | 0.3839\* | -0.0072\* | 0.6044 | 0.065 | 3.34 | 0.8481 |
| Lábrea | 0.2497\* | -0.0050\* | 0.5348 | 0.128 | 2.74 | 0.8050 |
| Manaus | 0.3079\* | -0.0063\* | 0.4777 | 0.141 | 3.63 | 0.7997 |
| Parintins | 0.4622\* | -0.0074\* | 0.6236 | 0.244 | 3.29 | 0.8719 |
| S. G. da Cachoeira | 0.2067\* | -0.0033\* | 0.6827 | 0.313 | 2.82 | 0.8587 |
| Sinop | 0.1415\* | 0.0015\* | 0.3659 | 0.113 | 3.42 | 0.7283 |
| Belém | 0.3298\* | -0.0074\* | 0.4236 | -0.035 | 2.75 | 0.7753 |
| Cametá | 0.4085\* | -0.0070\* | 0.4798 | -0.164 | 2.73 | 0.7939 |
| Conceição do Araguaia | 0.1733\* | -0.0016\* | 0.5043 | 0.134 | 3.16 | 0.8010 |
| Itaituba | 0.2640\* | -0.0044\* | 0.5414 | 0.097 | 3.31 | 0.8080 |
| Marabá | 0.2200\* | -0.0033\* | 0.5097 | -0.009 | 2.77 | 0.7934 |
| Monte Alegre | 0.3568\* | -0.0058\* | 0.4865 | -0.098 | 3.11 | 0.8038 |
| Óbidos | 0.2438\* | -0.0053\* | 0.5738 | 0.007 | 2.81 | 0.8662 |
| Soure | 0.8391\* | -0.0093\* | 0.4739 | -0.146 | 3.07 | 0.8316 |
| Tucuruí | 0.2670\* | -0.0049\* | 0.3586 | -0.191 | 2.78 | 0.7693 |
| Boa Vista | 0.2309\* | -0.0037\* | 0.579 | 0.141 | 2.85 | 0.8471 |

Table 91. Coefficients of the model 84 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | Statistical indices | | |
| a | b | c | d | R^2 | MBE | RMSE | d |
| Rio Branco | 0.7589\* | -0.0030\* | 0.0218\* | 2.02\* | 0.639 | -0.080 | 2.81 | 0.8956 |
| Macapá | 1.45\* | -0.0075\* | 0.0193\* | 2.37\* | 0.7342 | 0.041 | 2.70 | 0.9243 |
| Barcelos | 1.25\* | -0.0065\* | 0.0183\* | 2.13\* | 0.7082 | -0.046 | 2.79 | 0.9199 |
| Eirunepé | 0.6829\* | -0.0013\* | 0.0299\* | 1.68\* | 0.6573 | -0.072 | 2.47 | 0.8962 |
| Itacoatiara | 1.13\* | -0.0066\* | 0.0328\* | 2.07\* | 0.6575 | 0.023 | 3.09 | 0.8846 |
| Lábrea | 1.11\* | -0.0066\* | 0.0221\* | 2.14\* | 0.6291 | 0.171 | 2.40 | 0.8628 |
| Manaus | 0.8927\* | -0.0052\* | 0.0159\* | 2.36\* | 0.5363 | 0.044 | 3.47 | 0.8436 |
| Parintins | 1.34\* | -0.0073\* | 0.0183\* | 2.57\* | 0.6952 | 0.261 | 2.92 | 0.9076 |
| S. G. da Cachoeira | 0.9126\* | -0.0010\* | 0.0519\* | 1.25\* | 0.7843 | -0.053 | 2.39 | 0.9274 |
| Sinop | 0.6203\* | 0.0003ns | 0.0245\* | 1.85\* | 0.4687 | - | - | - |
| Belém | 1.05\* | -0.0071\* | 0.0147\* | 2.32\* | 0.4537 | -0.064 | 2.69 | 0.8006 |
| Cametá | 1.21\* | -0.0068\* | 0.0088\* | 2.81\* | 0.5342 | -0.151 | 2.62 | 0.8230 |
| Conceição do Araguaia | 0.7376\* | -0.0022\* | 0.0258\* | 1.81\* | 0.5969 | 0.015 | 2.84 | 0.8672 |
| Itaituba | 0.7642\* | -0.0025\* | 0.0136\* | 2.33\* | 0.6514 | -0.062 | 2.77 | 0.8973 |
| Marabá | 0.7888\* | -0.0030\* | 0.0193\* | 2.07\* | 0.6198 | -0.042 | 2.47 | 0.8661 |
| Monte Alegre | 1.14\* | -0.0064\* | 0.0138\* | 2.75\* | 0.5823 | -0.062 | 2.85 | 0.8464 |
| Óbidos | 0.8694\* | -0.0054\* | 0.0046\* | 2.82\* | 0.6548 | -0.055 | 2.57 | 0.9009 |
| Soure | 2.16\* | -0.0090\* | 0.5803\* | 0.6671\* | 0.5313 | -0.039 | 2.88 | 0.8394 |
| Tucuruí | 0.9234\* | -0.0057\* | 0.0861\* | 1.65\* | 0.3841 | -0.176 | 2.69 | 0.7788 |
| Boa Vista | 0.7794\* | -0.0023\* | 0.0225\* | 1.93\* | 0.6283 | 0.029 | 2.71 | 0.8853 |

Table 92. Coefficients of the model 85 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 1.23ns | 21.30ns | 0.3654 | - | - | - |
| Macapá | 2.36ns | 17.89\* | 0.4521 | - | - | - |
| Barcelos | 2.89ns | 14.36ns | 0.3642 | - | - | - |
| Eirunepé | 4.65ns | 32.14ns | 0.2458 | - | - | - |
| Itacoatiara | 2.14ns | 15.89ns | 0.4126 | - | - | - |
| Lábrea | 3.89ns | 41.23ns | 0.4217 | - | - | - |
| Manaus | 6.12ns | 21.23ns | 0.3142 | - | - | - |
| Parintins | 3.48ns | 23.47ns | 0.4127 | - | - | - |
| S. G. da Cachoeira | 2.36ns | 31.41ns | 0.2364 | - | - | - |
| Sinop | 2.14ns | 41.32ns | 0.4127 | - | - | - |
| Belém | 6.14ns | 22.31ns | 0.3214 | - | - | - |
| Cametá | 2.15ns | 31.24ns | 0.2217 | - | - | - |
| Conceição do Araguaia | 2.14ns | 24.17ns | 0.3412 | - | - | - |
| Itaituba | 2.47ns | 36.14ns | 0.4021 | - | - | - |
| Marabá | 4.14ns | 21.14ns | 0.2141 | - | - | - |
| Monte Alegre | 5.65ns | 14.20ns | 0.3214 | - | - | - |
| Óbidos | 3.45ns | 32.14ns | 0.1223 | - | - | - |
| Soure | 5.13ns | 15.26ns | 0.1457 | - | - | - |
| Tucuruí | 6.12ns | 14.32ns | 0.2134 | - | - | - |
| Boa Vista | 2.14\*\* | 15.21ns | 0.2115 | - | - | - |

Table 93. Coefficients of the model 86 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | Statistical indices | | |
| a | b | R^2 | MBE | RMSE | d |
| Rio Branco | 2.14ns | -0.2654\* | 0.2367 | - | - | - |
| Macapá | 3.89\* | -1.25\* | 0.5089 | 0.026 | 3.59 | 0.8375 |
| Barcelos | 2.61\* | -0.7649\* | 0.1787 | 0.208 | 4.78 | 0.5346 |
| Eirunepé | 1.23ns | -0.0234ns | 0.2314 | - | - | - |
| Itacoatiara | 2.72\* | -0.8452\* | 0.2506 | -0.054 | 4.52 | 0.6352 |
| Lábrea | 2.44\* | -0.7207\* | 0.1061 | -0.192 | 3.33 | 0.6769 |
| Manaus | 1.80\* | -0.5079\* | 0.1991 | 0.023 | 4.51 | 0.6080 |
| Parintins | 3.05\* | -0.9471\* | 0.3359 | 0.037 | 4.16 | 0.7511 |
| S. G. da Cachoeira | 2.14ns | -0.2367ns | 0.2368 | - | - | - |
| Sinop | 1.36ns | -0.3687ns | 0.2214 | - | - | - |
| Belém | 2.14\* | -0.6369\* | 0.1883 | -0.083 | 3.24 | 0.6116 |
| Cametá | 1.90\* | -0.5128\* | 0.1877 | -0.135 | 3.42 | 0.5971 |
| Conceição do Araguaia | 1.12ns | -0.0526ns | 0.1427 | - | - | - |
| Itaituba | 1.32ns | -0.0652ns | 0.1524 | - | - | - |
| Marabá | 1.14ns | -0.1241ns | 0.1732 | - | - | - |
| Monte Alegre | 2.18\* | -0.6204\* | 0.2668 | -0.073 | 3.70 | 0.6496 |
| Óbidos | 2.12\* | -0.6143\* | 0.3218 | -0.136 | 3.53 | 0.7486 |
| Soure | 2.54\* | -0.7580\* | 0.4217 | -0.031 | 3.21 | 0.7823 |
| Tucuruí | 1.58\* | -0.4153\* | 0.1672 | -0.142 | 3.17 | 0.5971 |
| Boa Vista | 1.24\* | -0.2772\* | 0.2346 | 0.170 | 3.87 | 0.6123 |

Table 94. Coefficients of the model 87 Group V adjusted for the 20 weather stations (p-value 0.01\*, 0.05\*\* and not significantns).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weather Station | Coefficients | | | | | | Statistical indices | | |
| a | b | c | d | e | R^2 | MBE | RMSE | d |
| Rio Branco | 0.3151\* | -0.0010\* | 0.7916\* | -0.6630\* | 0.3259\* | 0.7739 | 0.075 | 2.30 | 0.9318 |
| Macapá | 0.5545\* | -0.0039\* | 0.6991\* | -0.2815\* | 0.0105ns | 0.9065 | 0.057 | 1.56 | 0.9766 |
| Barcelos | 0.5695\* | -0.0037\* | 1.01\* | -1.28\* | 0.7231\* | 0.814 | 0.066 | 2.18 | 0.9511 |
| Eirunepé | 0.2992\* | -0.0008\* | 0.9913\* | -1.30\* | 0.7986\* | 0.7635 | 0.120 | 1.97 | 0.9358 |
| Itacoatiara | 0.3054\* | -0.0013\* | 0.8205\* | -0.7417\* | 0.3725\* | 0.8229 | 0.025 | 2.17 | 0.9480 |
| Lábrea | 0.5921\* | -0.0036\* | 0.6838\* | -0.7430\* | 0.4010\* | 0.7789 | 0.110 | 1.93 | 0.9206 |
| Manaus | 0.2722\* | -0.0007\* | 0.7741\* | -0.6619\* | 0.3626\* | 0.7853 | 0.082 | 2.26 | 0.9429 |
| Parintins | 0.4465\* | -0.0029\* | 0.9085\* | -0.8026\* | 0.3620\* | 0.8992 | 0.056 | 1.85 | 0.9675 |
| S. G. da Cachoeira | 0.0158ns | 0.0020\* | 0.9553\* | -0.9965\* | 0.5822\* | 0.7822 | - | - | - |
| Sinop | 0.3418\* | -0.0004\* | 0.7062\* | -0.7442\* | 0.4975\* | 0.6400 | 0.078 | 2.56 | 0.8801 |
| Belém | 0.4523\* | -0.0030\* | 0.7042\* | -1.08\* | 0.8159\* | 0.6896 | -0.089 | 2.03 | 0.9034 |
| Cametá | 0.2710\* | -0.0005\* | 0.8076\* | -0.6158\* | 0.2854\* | 0.8457 | 0.020 | 1.54 | 0.9512 |
| Conceição do Araguaia | 0.1660\* | 0.0005\* | 0.8704\* | -0.7433\* | 0.3853\* | 0.8211 | -0.087 | 1.90 | 0.9484 |
| Itaituba | 0.2987\* | -0.0009\* | 0.8990\* | -0.7302\* | 0.2883\* | 0.8885 | 0.049 | 1.47 | 0.9744 |
| Marabá | 0.3372\* | -0.0011\* | 0.8485\* | -0.9164\* | 0.5064\* | 0.8108 | -0.088 | 1.73 | 0.9424 |
| Monte Alegre | 0.1997\* | 0.0002ns | 0.8670\* | -0.6433\* | 0.2913\* | 0.9024 | - | - | - |
| Óbidos | 0.4245\* | -0.0025\* | 0.7358\* | -0.8519\* | 0.5212\* | 0.8106 | -0.075 | 1.91 | 0.9486 |
| Soure | 0.1768\* | 0.0013\* | 0.9477\* | -1.18\* | 0.6854\* | 0.8426 | -0.113 | 1.75 | 0.9532 |
| Tucuruí | 0.3945\* | -0.0015\* | 0.5608\* | -0.4896\* | 0.2883\* | 0.6997 | -0.068 | 1.93 | 0.9024 |
| Boa Vista | 0.3182\* | -0.0008\* | 0.8494\* | -0.9160\* | 0.5537\* | 0.8464 | 0.044 | 1.74 | 0.9567 |